

Learning and Teaching– Inside and Outside the Classroom

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From the Editor

"The art of teaching is the art of assisting discovery."

Tith this quotation from Mark Van Doren, we issued our call for contributions to this theme issue on learning and teaching. Van Doren (1894-1972) was a novelist, editor and poet who joined the Columbia University faculty upon receiving his Ph.D. there in 1920, and where he continued to teach for 40 years. Among the many students who revered him were poets Allen Ginsberg and John Berryman.

With Van Doren's words as a jumping-off point, we invited authors to address learning and teaching at any stage of life, outside classrooms as well as within them. We are delighted to present a diverse and thought-provoking palette of responses to our call.

We showcase the work of three poets. The narrative voice in Carter's poem "Educators" is that of a learner, while Quirk Cairns ("Advice to Students or You Deserve the Fairy Wings") speaks as a teacher. Raskin's prose poems (selections from a still-in-progress cycle) represent neither side of this dichotomy, but describe settings and situations in which insight or understanding may be subtly acquired, with or without intentionality.

Three authors investigate learning and teaching outside the classroom. Stroud ("How Do You Learn Science?") encounters a mobile teaching application during a walk in the woods, and builds on this encounter to envision ever-broader landscapes as venues for learning. Fink Shapiro ("Architecture and Environmental Discovery") compares certain buildings and landscapes to "unforgettable teachers." He describes spaces that silently communicate to our senses and sensibilities, and thereby transform our understandings. Kershner prefaces a dialogue with Henry Giroux ("Teaching and Learning with Henry Giroux") by recalling the work of C. Wright Mills on the "cultural apparatus." The author and his interlocutor discuss the ways in which the "public pedagogy" of the Internet, entertainment industries, and other cultural interventions may both reshape and marginalize the "education" students get during their hours of schooling.

Two authors examine the influences that can shape a person toward a life in art. An excerpt from a forthcoming book by Gengarelly (A World Transformed: The Art of Jessica Park) shows us how teachers, peers, places, and family all played a role in nurturing Ms. Park's ability to draw and paint, and thereby also drew her to some degree out of the cocoon of autism. Scheckler ("A Storm of Exceptions: On Being a 21st Century Artist-Teacher") traces the author's ramshackle trajectory toward life as maker and teacher of art, incorporating tears in a pizza shop, setbacks on a ski mountain, and sideways glances at Michelangelo, Lewitt, and Basquiat.

Two authors seek to appraise the feelings and perceptions of students in their university classrooms. Jacques ("Gold and the Night Watchman's Daughter") ruminates on a single episode of reading Whitman during a class. The poet asserts, in Jacques' words, "happiness is not tied to wealth, but to other human beings." Do the students get that message? He unearths some shards of evidence that they do. Zoltanski's quest to gauge the emotional state of undergraduates is an empirical one ("Undergraduate Happiness: Some Preliminary Field Notes from the Classroom"). She created a course on the sociology of happiness, and shares what she is learning from and about students.

Two of our authors, Fink ("Reconstructing the University Classroom as if it were a Preschool") and Crosby ("Reflections on the Craft of Teaching"), take a crack at describing their own teaching methods. Fink rejects the sedentary role of the student, to which he was subjected as an undergraduate, and proposes that college students deserve opportunities for active learning akin to what is available in high-quality early childhood settings. Crosby affirms the value of a good lecture, one that has been properly thought out and prepared. One important step, he advises, is for the aspiring lecturer to think carefully about the distinction between teaching and entertainment. Another is to eat a hearty breakfast.

We recommend taking this issue of *The Mind's Eye* along with breakfast. Whatever time of day you get to it, we look forward to hearing your comments.

Dale Borman Fink, Ph.D. *Guest Editor*

Reconstructing the University Classroom as if It Were a Preschool

BY DALE BORMAN FINK

hen I went to college, the professors "taught" and the students took notes. Exams and papers were the sole mechanisms by which faculty evaluated our learning. Audio-visuals (at least in the humanities, education, and social science courses I took) were nearly non-existent. There was never any kind of work with peers—except in one famous Social Relations class that had peer interaction as its sole curriculum. I never took a class in which a student made a presentation or displayed a poster. This was at Harvard, and there were among my professors some gifted and inspiring lecturers. So this method of instruction worked well for me—for three or four semesters.

By the time I was a junior, I felt alienated by the omnipresent lecture hall. Although I loved Balzac, Dickens, and Dostoevsky, I no longer could sit passively and listen—even to a well-known scholar—discourse twice a week on these great authors whose novels were the subject of one course I took. The "tutorials" and seminars were more palatable because they were discussions rather than lectures, and were intensively up-close-and-personal. But there were no instructional methods beyond the basics: (a) texts, lots of texts; (b) discussing texts; (c) writing about texts.

During my final year in college, I began working with preschool-aged children at KLH Child Development Center in Cambridge, MA, one of the first employer-sponsored childcare centers in the country. The Center was founded and staffed by visionary educators and leaders, and I got to see how young children assimilated and mastered language, social skills, science, literacy, and math concepts in a supportive environment, in which adults facilitated their learning but did not force them to run a preconceived curricular gauntlet. I saw that children learned through their senses, through engagement with peers, and through interaction with all aspects of the indoor and outdoor environment. I saw that when adults didn't get in their way or overly intrude on how they spent their time, these young learners immersed themselves in all kinds of investigations, and turned to adults for information, for social problem solving, and for nurturing. I became vaguely and bewilderingly aware that the social and intellectual discourse surrounding me at the childcare center had a deeper, richer, and more authentic quality than what I experienced at Harvard.

A few years later, I obtained a Master's in early childhood education, and came to realize that the approach to learning I witnessed at KLH (and by then, in some other places, too) was not the whimsical product of the particular personalities there, but was consistent with a multi-generational tradition of American "nursery education," and supported by theorists like Dewey, Piaget, and Montessori. According to this tradition and these theorists, students do not assimilate or absorb knowledge by having it handed over or explained by someone who knows more, but rather, (to use one of Piaget's key words) they construct knowledge. They do this through hands-on engagement, and by developing insights—sometimes including inaccurate ones, which they will use their later experiences and observations to correct.

I looked back on my Ivy League education and found myself perplexed. Given this well-documented understanding of how human learning takes place, why did my professors restrict themselves to such a limited repertoire of instructional modalities? In calling it "higher education," did our society mean to untether it from the human imperatives that affect everyone else? Did someone believe that students at age 18 (or for that matter, 48) no longer benefited from peer interaction, multi-sensory input, carrying out independent investigations, or having a chance to construct—and then later correct—their own understandings?

By the time I became a faculty member in higher education, a few decades had passed. I wasn't sure what teaching methods other faculty members used anymore. But I wanted to bring to my students richer and deeper

opportunities to think and learn than were given to me as an undergraduate. I wanted to teach college like an early childhood educator.

You are entering a learning zone: no teacher required

A high-quality early childhood setting is thoughtfully designed to encourage students to work independently; arriving students do not wait for a teacher to come to the front of the room and signal that it's time to begin learning. Quite the opposite: the children presume they should get busy on their own, unless and until the teacher signals them to put away what they are working on and, for example, assemble for a "morning meeting." Arriving students typically hang up their coats, transfer a card with their name on it to a display board that indicates they are present, perhaps (if this is a public school) make a notation on a list as to whether they brought lunch or will need a cafeteria lunch, greet their friends, and (if they can read) find a morning assignment handwritten on a flipchart or a whiteboard. If the classroom features living animals, the morning assignment could be to observe the animal in its habitat and record observations in a science journal. In preschool or kindergarten, time may be available to build with blocks, put on a smock and paint at the easel, engage in the dramatic play area, take out a puzzle, look at books, or draw independently.

Through this approach, learners do not acquire a view of the teacher as the sole, or even primary, provider of information and instruction. Rather, they know that a teacher can fulfill a variety of helpful roles: assist you in finding a book in the library corner, tie on a smock, or record words that you dictate on your painting or drawing. Not being at the front of the classroom or at the center of the learning process frees the teacher to circulate among the students, building relationships by engaging in personal conversations and carrying out informal assessment. The teacher, thus freed, can scaffold the play or efforts of individual students, at whatever level of support each one needs. ("Scaffolding" was a term favored by the Soviet scholar Lev Vygotsky, whose work I did not encounter during my studies in early childhood education. His work was contemporaneous with the early work of Piaget, but was unknown by educators in our country until the 1980s.)

Sign in, begin learning

Students in my university classes know to sign in on an attendance sheet, and then find a card (a folded 3 x 5 colored index card) with her or his name on it. After that, she or he looks for a handout or something posted on the whiteboard, detailing an in-class assignment. It could be a web search with an expectation of reporting later to classmates. There could be time allotted

for reading an article, with each student or each set of partners summarizing a portion of the article. It could be taking a practice test, independently or with a partner, to review something we studied recently.

While class members work semi-independently, I scaffold individual students' learning and build relationships with them. I monitor activities, consult with small groups or partners, and feed them ideas if they are stuck. I informally assess how well they have grasped concepts recently covered. This also is a time to trouble-shoot issues concerning recent assignments or answer questions about grades. Students can seek to speak to me privately during this time period, or I can initiate a private conversation as needed.

Hold the syllabus; start the engagement

Most students arrive at the first meeting of a new course with the expectation that they can be passive and sedentary. There haven't been any reading assignments yet, so how could they be expected to participate actively? Experience also has taught them that the first class will be "organizational," rather than content-focused. I design the first class meeting to deliberately challenge these expectations. I do not even introduce myself, let alone discuss the syllabus. As soon as they set foot inside the classroom door, I involve them in a content-focused activity that requires interaction with peers.

My Children's Literature students sometimes arrive on the first day of class to find the chairs arranged in clusters of four. A copy of *Goodnight Moon* by Margaret Wise Brown is available for each group, along with a handout defining roles they should choose (facilitator, reader, reporter), and a list of guiding questions to consider as they read and analyze the text and illustrations. In another class, students are asked to find a partner and work on a "quiz" together. The topics on the quiz foreshadow what we will study in the months to come. In a graduate special education course on Assessment, I separate the students into two groups, one to craft a "strength-based assessment" of Helen Keller, and the other to draft a "deficit-based assessment." They then watch a few scenes from the 1960s film, *The Miracle Worker*, in which young Helen meets her teacher, the legendary Annie Sullivan, for the first time. The assignment draws on concepts to which the students have not yet been introduced; in preschool, we call that "discovery learning."

I circulate among the students once they are occupied with the assigned tasks, and welcome them individually in a way I could not if I were to lead the class from a lectern. Then I exit the classroom for a few minutes. I want them to see that—so long as I have properly prepared the learning environment—their learning does not require my presence.



Uncovering, discovering, and constructing knowledge: Dale Fink watches as two of his students, with magnifying glass and bug catcher in hand, search for living organisms to show their classmates.

Engage bodies, emotions, and aesthetic sensibilities—not just minds

In early childhood education, we call it "teaching the whole child." We do not confine our role to supporting children's "minds" (i.e., cognitive or intellectual growth). Preschoolers need support in the areas of physical/motor, social/cultural, emotional, and aesthetic development. I have not found any reason to approach learners at other stages of life differently. Some university students will deepen their engagement with a text if I give out markers, pencils, and paper, and ask them to respond through visual or artistic representation. Some resonate to musical thinking. When one of my students developed a demonstration lesson for third graders on the water cycle, I challenged her to create a rap using the words, "accumulation, precipitation, condensation, and evaporation." After they studied how an author of a contemporary children's book reinterpreted a Native American fable, I asked students what they knew about reinterpretation in other creative arts forms. One student eagerly introduced classmates to Tori Amos's version of the song, "Smells like Teen Spirit." We listened in class to Nirvana's original recording and then to the reinterpretation, and searched together for themes or concepts that might be applied to the act of reinterpreting across the boundaries of literature and music.

I look for texts that will touch deep places of emotion in students. A favored fictional text related to education is *Crow Boy*, a 1955 picture book by Taro Yashima, about a poor peasant boy in rural Japan who is rejected and scorned by his classmates.

Sometimes there is no need for a text. Can you and your partner set up these dominoes in the shape of a "Y" and make them fall? What did you need to "know" in order to complete that task? Of what physics properties did you have to take account? What do you think a younger child would get from doing this activity?¹

Take some play dough and some cookie cutters and other implements, and begin playing. Feel free to talk and work together with your friends at the same table. After a while, put away the play dough and jot down some notes. What kinds of learning and development do you think go on at a table like this, when three-and four-year-olds are playing with play dough? What do you think a teacher should be doing (and not doing) to support learning during this activity?

Most classroom activities allow students to get out of their seats and move about (e.g., small groups can work in the corridor if they prefer). The proportion of time students spend in my classes when they have to sit in one place is relatively small. In addition, they know that, at any time, they may move, change seats, stand, stretch, or take a break from class without asking for permission. That's one of the ground rules I announce at the first meeting of every course.

After a literature circle, some drawing, playing with materials, reading an article, or a web-based activity, we reconvene as a group and share what we've learned. When I am able to come across as a facilitator rather than as the main provider of information, I then have moved to the role I want to occupy, and have allowed students to take more responsibility for constructing their own understandings.

Build social support, scaffold new connections

When a preschooler arrives for her first day, what signals her that someone is looking forward to her arrival? She finds a cubby labeled with her name. I have no cubbies, but I tell students that—like at a wedding or a bar mitzvah—they each have to find their name on a card. They see that I made at least a small effort to welcome them, and I believe that searching on a table for their name preprinted in a large font and taped onto a colored card gives them something to focus on, instead of being nervous about a new class.

¹ I adapted this activity from Ozaki, Yamamoto, and Kamii (2008). What do children learn by trying to produce the domino effect? *Young Children 63*, 5, pp. 58-64.

In addition to helping me learn their names, the cards serve other purposes unknown to the students. I color-code the cards so that long before I have learned names, I know by the color whether I am calling on a first-year student or a senior. When I want them to find a partner or work in a small group, I don't need to say, "Please choose someone who is not your roommate or best friend." I simply instruct them to find a partner whose name card has a color different from their own, or form a group that includes one of each color. This assures they'll be with students of diverse graduating classes. Conversely, there are times when I want the first-years to convene in a discussion group together, and all the seniors, too. The color-coding easily allows me to do that, as well.

Later in the semester, when I know the students, I sometimes create groups of my own choosing by placing selected name cards on chairs that are set up before students arrive. At other times, students have free choice to form their own groups—but after a couple of months, they draw from a larger circle of acquaintances than would have been possible at the start of the semester. My goal in small group work, aside from taking myself out of the center of the learning process, is both to build on the natural supports that some class members are eager to provide to one another, and also to challenge learners to form new connections. The methods I use enable me to subtly encourage connections that cross generation, gender, ethnicity, and cultural backgrounds, as well as anticipated year of graduation.

Have them write papers for someone else—not for professors!

College students—and graduate students even more so—like to impress faculty with their mastery of conceptual language and their use of arcane, field-specific vocabulary. It is not the students' fault; years of training and experience seem to have convinced many of them that filling their papers with euphonious, polysyllabic phraseology is a surefire route toward a high mark. I used to provide detailed feedback, requesting that students be more consistent in illustrating concepts with clear examples, and replace jargon whenever possible with more widely recognized words. But eventually, I figured out a better strategy: stop writing papers for me. Write the paper for a different audience.

Students learning to be early childhood educators have to write a letter to a disgruntled parent. "Why is my daughter playing with marbles and ramps when I come to pick her up?" the parent wants to know. "Is the teacher too tired at the end of the day to work with her on her letters, or read her a storybook?"

Students becoming elementary teachers read *The Curious Incident of the Dog in the Night-Time* (Haddon, 2005) and then have to pretend the narrator, Christopher, was a student in their classroom this year. (He is 17 in the book, and has many characteristics that appear to place him on the autism/ Asperger's spectrum. They imagine what he would have been like as a fourth grader.) The assignment is to write a letter to the fifth grade teacher who will have Christopher next fall. That colleague wants to know, "warts and all," what it will be like to have this boy in her classroom. The teacher works just down the hall from you, and she's counting on your insights and recommendations for how to get off on the right foot.

Students who study to be special educators read a published case study that details problems of professional practice in an actual school district in West Virginia. The good news, delivered in the form of an assignment, is: You just got a new job! The bad news? You're the new special education director in Rainelle County, West Virginia! The superintendent who hired you requests that you write a letter to those you will be supervising, identifying the key issues unearthed in the case study, and suggesting ways the district can address these challenges. My hope is that, in constructing this letter, my students will leave me out of their thoughts and focus on how to make the right impression on those reading this letter. (This tactic succeeds with many students, but not all.)

When we don't know the answers, our students can surprise us

One of my early childhood mentors at the University of Illinois, Lilian Katz, believed it was disrespectful to ask a child a question whose answer you already knew. If you did, you were just "testing" them, and not having an honest conversation. I do give exams where there are correct answers. However, I try to allocate as many assignments and as much class time as possible to promote authentic exploration, analysis, or discussion in which there are no preconceived or correct answers. Students gain confidence in their own thinking when they participate in inquiry and have some autonomy over the subjects of their inquiries; that is what I learned as an early childhood educator.

Go to the website that displays special education data for every school district in our state, I tell my students. Choose a town or city anywhere in Massachusetts. (They choose towns where they have lived or to which they have some connection or interest, which drives up their interest in the task.) Write the names of the town or city you've chosen on the whiteboard. Record the percentage of students in the selected district who receive special education supports and the breakdown into categories (i.e., what percentage have been labeled with "learning disabilities," what percent "autism," etc.) From

another table, record what percent are fully included in classes with their typical peers, compared to the percentage who spend their days in segregated settings. I can use my knowledge of general trends to anticipate certain results and patterns, and to ask probing questions to help them put the numbers they find in context. However, there is tremendous variation across communities, and I cannot account for all that they uncover. I become a co-investigator with them in interpreting the data.

When I assign my Children's Literature students to analyze the use of colors (and black and white) by illustrator Clement Hurd in Margaret Wise Brown's *The Runaway Bunny*, or to interpret the references to watches, clocks, and time in Brian Selznick's *The Invention of Hugo Cabret*, it is because puzzlements have occurred in my own reading of the work. I am not guiding students toward somehow equaling my own level of erudition on the subject matter! I often feel anything but erudite, and I honestly hope at least one or two of them will guide me to a deeper understanding of the work. Some students, even if they never expand my own understanding, take extra time to reflect, when they realize that their contributions are not being matched against predetermined "right answers."

When students surpass the professors—how do we assess them?

The dean's office at my university has worked for several years to identify and then measure "outcomes" in various areas of the higher education curriculum. Within the creative arts, for instance, we have devised assignments to assess students' ability to find and then analyze and interpret motifs, whether in musical passages, poetry, painting, film, or literature.

We are to use the results of a single assignment to classify students as "exemplary," "proficient," "developing," or "not acceptable" on this learning outcome. To earn the top score (as defined in a rubric), a student has to find all of the motifs in the work, and then describe and thoughtfully analyze them. Clearly, this rubric presumes that professors must already have found each and every motif there is to find in the works students are asked to examine.

I thought more about this rubric and these assumptions when one of my students was giving a class presentation on the text and illustrations of *Where the Wild Things Are*, by Maurice Sendak. She did not comment on the resonance of the words that Max, the young protagonist, used when sending the Wild Things to bed without their supper. She failed to notice that he used the same words on the Wild Things that Max's mother used toward him. In other words, my student missed at least one very salient motif. However, she identified a pattern and variation that I had not discerned in my dozens of

previous readings of this celebrated work. She noticed that as Max begins to encounter the Wild Things, they have borders around them. But as the reader turns the pages and follows Max deeper into his fantasy, the border extends closer to the edges of the pages and finally, during a Wild Rumpus, the Wild Things break the boundaries of the page borders. There are no more borders, no more boundaries at all; Sendak's painted forest and characters cover every square centimeter of the paper and leave no room for white space, borders, or words. My student explained that, to her, this breaking of the borders seemed to parallel and represent the unbounded nature of Max's imagination, as he went deeper on his inward journey.

Is it important that we be able to classify each student on a scale from "not acceptable" to "exemplary"? If it be important, then where on this scale do we place a student like this, whose depth of insight outpaces her professor in some ways, even while lagging behind him in others?

Jean Piaget, the Swiss biologist who became one of the 20th century's leading child development theorists, divided education into two types—passive and active. To choose between these two, he explained, we must clarify our goal. "Must we shape children and individuals who are simply capable of learning what is already known? To repeat what has been acquired by the preceding generations? Or is it about shaping innovative, creative minds?"

I think Piaget would have recognized in my student's discourse on Sendak the mark of an innovative, creative mind, born of being an active, rather than a passive, learner. The increasing focus on educational outcomes embodied in rubrics is not designed to promote learning, but to facilitate measurement and comparison across disciplines and institutions. It has the potential to devalue the kind of creative engagement with subject matter this student demonstrated, and take us backward to the kinds of sedentary educational environments that were in vogue when I was an undergraduate. Instead of retreating, why not move forward to envision how the learning spaces and pedagogy of a university can excite the imagination and support the quest for knowledge? If we commit ourselves to that project, I am confident that we university professors can support learning and thinking as well as our colleagues in high-quality early childhood settings across the country and the world.

 $^{^2}$ From the opening minutes of the film, "Piaget's Developmental Theory: An Overview" (1989, Films Media Group). The English translations are my own, not those given in the subtitles.

Architecture and the Art of Discovery

BY GIDEON FINK SHAPIRO

rchitecture gets in trouble when it tries directly to instruct. Didactic architecture tends to come off as heavy-handed or contrived. But architecture at its best is an art of assisting discovery, to recall Mark Van Doren's formulation of teaching. Beyond accommodating a given set of practical functions, architecture may reveal a web of social, physical, and environmental relationships. Good architecture allows its users to discover something about its milieu according to the interests and imagination with which they engage it. Like unforgettable teachers, certain buildings and landscapes can move us to stretch to apprehend things that we didn't realize even existed, but which, once discovered, we cannot live without. Or, like the world of chemistry that I discovered in high school with the help of a great teacher, some architecture fades from memory in its particulars, but leaves intact the scorching thrill of experiencing it.

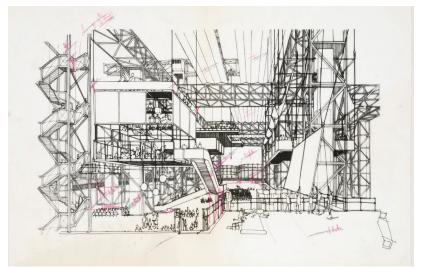
Made of relatively inert materials, architecture must communicate silently, indirectly, relying on visitors to use their own senses and sensibilities to take in their surroundings. The lack of a common iconographical language today makes this challenge all the more interesting. Whereas architects of past centuries used agreed-upon forms and symbols to broadcast their intentions, no one today is expected to know the semiotic differences between the ancient Doric and Corinthian orders. But we still want to know where we are. And discovering where we are, and how we fit in with our environment—particularly in a world of sometimes disorienting mobility, virtual interactions, and effortless consumption—is something that architecture can facilitate. It does so by giving shape to the relations and ideals by which we understand our environment, and mediating those relations. It allows us to discover a sense of topography encompassing both cultural and ecological values.¹

We trace our path of discovery through the built environment from infancy. It is through domestic architecture and its thresholds, for example, that many of us first discover the complex cultural expectations of privacy and togetherness. The architect Richard Neutra, who authored a physiological theory of architecture in the 1950s, insisted that the textures, lighting, and smells of the home and school environments could profoundly influence a child's health and relationship to the world.² Even for adults, discovery presupposes not erudition but a kind of naïveté. To be prepared to discover something you must not already have all the answers.

One of my earliest memories of architecture as a trigger for discovery was an igloo-shaped fort of branches and leaves at the edge of the woods in rural Pennsylvania. It was built by my friend's older (adolescent) brothers, who invited us for a look. After guiding us through fields and trees, they repaired the roof by tossing fresh heaps of leaves over the lattice of intersecting branches. We ducked inside to sit in a circle and talk about serious things amidst the filtered half-light. For me, this excursion to the fort amounted to the discovery of a locus, a place, a clearing. The fort defined a particular gathering place in a hitherto alien and limitless countryside. It seemed to cement our friendship with a pact consisting of the shared experience of inhabiting (and for them, constructing) a space. And it changed the way I saw the fallen vegetal matter of the forest, which came alive as the potential building materials for future utopian hideouts. This improvised work of architecture made the woods seem more beautiful and the friends more special, and thus prompted me to care more about them both.

The do-it-yourself fort apparently was the motivating principle behind the urban "adventure playgrounds" that sprung up in London and elsewhere after the Second World War. Strewn with bricks, timber, tires, and tools—marginally enhanced debris from bombed-out city lots—adventure playgrounds were designed to give kids the means to discover and develop their power to shape their environment. But what about adults? In the early 1960s, the British architect Cedric Price applied the logic of the adventure playground to a radical leisure space for adults, never built, called Fun Palace. In collaboration with the London theater director Joan Littlewood, Price designed a multi-story structure brimming with user-friendly architectural machinery derived from backstage theater apparatus. Visitors, like renegade stage techs, would have the ability to perpetually modify and experiment with their environment.³ In this equation, discovery in architecture was synonymous with the freedom to build. There were intriguing social implications as well: would equal rights to reshape architectural space imply equal rights to reshape society?

On the opposite end of the spectrum lies the un-playful architecture of monuments, freighted with the ponderous duties of memorialization and signification. Can such serious architecture really assist discovery? Is there anything left to discover after you've read what you're told to read and admired what you're told to admire? Yes, there can be. Take, for example, the newly



Cedric Price, Interior perspective of Fun Palace, ca. 1960-1964. This project, which Price conceived with theater director Joan Littlewood, was a vision for letting visitors shape their own environment as a stage for interaction.

Credit: Cedric Price fonds, Canadian Centre for Architecture, Montréal



FDR Four Freedom's Park, a newly opened memorial completed four decades after its design, invites visitors to ascribe their own significance to the landscape.

Credit: Photo by author

opened Four Freedoms Park, situated on a four-acre memorial to Franklin D. Roosevelt on the southern tip of Roosevelt Island in New York City, overlooking the United Nations. The project makes teaching immanent in the encounter between architecture, landscape, and visitor. The design—by Louis I. Kahn in 1973-74, executed posthumously—downplays the semantic directives in favor of evocative spatial-material experience. Like Stonehenge, it is abstract and mysteriously silent. The climax of the memorial comes at the end of an austere garden; an open-air "room" enclosed on three sides by towering slabs of granite, thirty-six tons each, separated by exactly one inch. The fourth side is open to the East River, the skyline, and the horizon.

With light trickling through the cracks, this primal gathering space feels intimate as well as monumental; delicate as well as solid. One perceives up close the swirling tidal waterways surrounding the metropolis, sometimes threatening it; but also the accrual of millions of actions that keep the city alive and somehow make it possible to conceive of peace, as the founders of the United Nations once did. On a recent visit to Four Freedoms Park, I wondered how New York's shoreline could be made more resilient in the face of rising sea levels. I thought about its beginnings and endings. As I remembered

and projected, this space gave me the feeling that the city belonged in the landscape, and that I belonged in it. It brought me to a threshold of participation in the vital, yet fragile, enterprise of urban civilization.

A more quotidian but no less inspired new waterfront space is Brooklyn Bridge Park, a complex of six former shipping piers and warehouses converted into public parkland by Michael Van Valkenburgh Associates. Here you can discover important technical and ecological functions of landscape while having fun. The stormwater collection system creates a promenade and irrigates the plants. The rolling contours of the lawn—created with fill from recent Manhattan subway excavations—serve to block traffic noise from a nearby expressway. The rough boulders along the water's edge, which help break the force of tidal surges, contain a kayak launch and beach. You can run yourself ragged playing soccer, or you can sit on the amphitheater steps and watch the sun set over the skyline as Brooklyn's diverse population strolls by. The park accommodates rising sea levels not with a giant barrier, but with intelligent and delightful landscape infrastructure that allows us to become intimate with the waterfront. Perhaps playing by the shore will make us pay more attention to the water—and to the ecosystems and economies that depend on it.



Unfolding views of the interior, terrace, and the landscape from the ramp at Le Corbusier's Villa Savoye in Poissy, France (1928).

Credit: End User 4 via Flickr (Creative Commons license)

The architect Le Corbusier often is remembered for calling the Villa Savoye (1928) a machine à habiter, or a machine for living. Less well remembered, however, is another phrase that he used to describe the same project: machine à èmouvoir, or machine to arouse emotion. At least for some visitors, the square, white house of steel, glass, and stucco at Poissy, France, engenders an almost spiritual self-reflection and environmental awareness. Villa Savoye makes its first impression from afar, hovering on slender poles above a grassy field. To enter it is to embark on an "architectural promenade" and montage: a continuous winding ramp passes through the various living areas all the way up to the semi-enclosed roof terrace, providing a sequence of carefully framed views. Every step reveals new spatial relationships, turning the elevated square structure into a rigorous dance connecting inside and outside. You sense the newness of the age of the automobile and film, but also a yearning for harmony between modern technology, the inner psyche, and the wider landscape. Had Le Corbusier known about Van Doren's philosophy of teaching, he might have added a third term to his list, machine à découvrir—a machine for discovery.

Endnotes

- 1 I borrow this use of "topography" from David Leatherbarrow, *Topographical Stories: Studies in Landscape and Architecture*. Philadelphia: University of Pennsylvania Press, 2004.
- 2 Richard J. Neutra, *Survival through Design*. New York: Oxford University Press, 1954. See especially ch. 21.
- 3 See Stanley Mathews, From Agit-Prop to Free Space: The Architecture of Cedric Price. London: Black Dog, 2007.

A World Transformed: The Art of Jessica Park

BY TONY GENGARELLY

Introduction

Tith the following excerpt, *The Mind's Eye* continues its tradition of publishing the winner of the Faculty Incentive Award for best lecture. Submissions for this award are judged by a committee of faculty peers at Massachusetts College of Liberal Arts. Professor Tony Gengarelly received the 2012 award for the pre-publication manuscript of his book, *A World Transformed: The Art of Jessica Park.* This book follows other scholarly activities Gengarelly has carried out relating to the art of Jessica Park, an artist with autism who was born in North Adams (where MCLA is located) in 1958, and continues to live in nearby Williamstown. With his students, he has mounted several major exhibitions of her work. In 2008, he published a compilation of her paintings, with commentaries.

The chapters we are publishing here, "Budding Talent," and "First Blooms," trace the early years of Jessica's pursuit of artistic expression. They eloquently address the theme of this issue of *The Mind's Eye*, in which authors are examining teaching and learning in their innumerable variations.

Access to schooling was one ingredient that nurtured Jessica's artistry—thanks to the fact that Massachusetts spearheaded the mandate to assure all children with disabilities an individualized, appropriate education, several years in advance of the rest of the nation. Once the doors to schooling were opened, this excerpt shows, it was in part the instructional opportunities that aided her. But equally important was the influence of peers—not the "peer group" in a general sense, but two very specific peers, highly motivated twin girls who liked Jessica, took an interest in her, and nurtured her artwork.

These two chapters also identify the impact of *place* and *space* on Jessica's creative learning process. The subjects of her art in the early years were those places and spaces—and furnishings and mechanical gadgets and doors, as well as people, that were a familiar part of her life. Beyond this published excerpt, the narrative details how Jessica eventually would render striking images of the Brooklyn Bridge, and the Taj Mahal, among many other well-known structures. These chapters show us the beginnings in her teens and 20s.

A World Transformed is an art biography that reaches beyond labels and stereotypes to focus on the artist and her artistry, as well as the person who is revealed through her art. Replete with full color examples of her work, this portrait of the artist features several interpretive illustrations by Danielle Christensen (MCLA 2011). Readers who wish to acquire the book from which we excerpt these chapters are encouraged to contact the author, at a.gengarelly@mcla.edu.



Jessica Park in her bedroom-studio, circa 1972

Budding Talent

As a result of a Massachusetts law that made public education for students with disabilities mandatory (one of the first in the United States), Jessica entered Mount Greylock Regional High School shortly after her 12th birthday in the fall of 1970. In art class, she met twin sisters about her own age, Anna and Diana Saldo, who would become lifelong friends. They took a shine to Jessica, noticed her ability to draw, and appointed themselves her art teachers. Anna and Diana followed the school's curriculum but they extended Jessica's art lessons to moments at the Parks' summer home on Block Island.

There, they coached her in drawing a variety of subjects, including an arresting portrait of Jessica's father, David. The artist's foot in the foreground implies that she was sitting on the bed to render this drawing. Jessica chose to include her foot in the picture because she evidently wanted to represent more of the scene than her seated father. One might call this an artist's inspiration or a literal inclusion typical of a person with autism.



Sketch of David Park, 1973

Jessica's line drawing of her father, with its delicate crosshatching, subtle tonal gradations and accomplished proportion, was matched that summer with another portrait of one of the twins. These relatively sophisticated drawings were accomplished in 1973, only one year after Jessica, with crayons and stick figures, created *The Book about the Songs*. Compared with those elementary drawings, the two portraits revealed a prodigious talent beneath Jessica's visual shorthand. This talent continued to surface during her several years in high school, and is confirmed by a number of other pictures, as well as her sketchbook from that time.

Over the years, Jessica's ability to understand and apply color also expanded. At the age of 14 she learned how to use acrylic paints from another good friend of the family, Valerie Pinsky. Valerie, then in her first year of college, was Jessica's camp counselor. She also visited the Park family on Block Island, and not only inspired *The Book about the Songs*, but introduced the use of acrylic paints. Jessica, thrilled with these new color applications, created a series of paintings on discarded wooden shingles. These "shingle paintings" were her first adventure with the medium she has used for her entire painting career.

Jessica graduated from Mount Greylock at the age of 21. Although she had made great strides in overcoming many of her developmental limitations and could read and write, her future was uncertain. She continued to make art, which was becoming a daily routine, and to accompany her mother when she spoke to groups and organizations about the subject of autism. Clara was determined to share her painfully gained insights with a larger audience, and Jessica gladly served as the living example of her mother's hard-earned wisdom.

On one such occasion, when Clara had brought some of Jessica's pictures as an illustration of her daughter's artistry, someone spied a painting and offered to buy it for a small sum of money. Somewhat surprised, Clara, with Jessica's approval, agreed to part with the picture, and an art career was born.

With encouragement from those who admired and purchased her work—family and friends, as well as people who cherished her art as an example of what someone with a developmental disability could do—Jessica began to create more and more paintings.

Now she combined her high school art training with a growing enthusiasm for mechanical gadgets to create two-dimensional pictures of space heaters, automobile dashboards, electric-blanket controls and radio dials. Jessica still is fascinated by mechanical objects. They appear in her more elaborate paintings of other subjects, such as clock towers.

She embellished her drawings of dials and heaters with an opulent array

of hues that pleased her. The colors also helped highlight important details and organize her pictures with their systematic application. *The Bathroom Heater at Franziska's House* from 1981 shows one of Jessica's preferred subjects arranged as a grid of 792 brightly colored rectangles. She accomplished the pattern with the application of one color at a time, a method that she still uses today. According to Clara's account in *The Siege* (1967), Jessica was able to see the entire grid in her mind's eye as she carefully laid in the colors.

This extraordinary application was most likely derived from an earlier experience of creating systems. From the ages of 12 to 16, Jessica used numbers and symbols to represent different emotional responses to sound and weather. Her numerical calculations soothed the intensity of an emotional response; the symbols recorded her levels of pleasure and displeasure. When under duress, Jessica calmed herself by doing elaborate calculations that ultimately balanced the numbers 3 (a "bad" number) and 7 (a "good" number). She made charts and diagrams for her symbolic language. Bright sun represented a perfect day or an exceptional sound, but clouds recorded a diminished excitement due to weather or other, in Jessica's words, "discouragements." She included doors, scaled 1:4, to mute the intensity of feeling

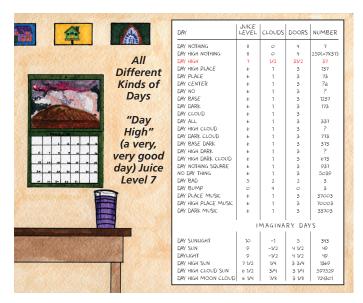
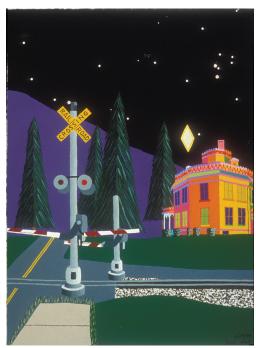


Illustration by Danielle Christensen (MCLA 2011); Jessica's chart found in David Park and Philip Youderian, "Light and Number: Ordering Principles in the World of an Autistic Child," *Journal of Autism and Childhood Schizophrenia* 4.4 (1974).

when it was, in her words, "too good." She even used a drinking glass with numbered lines on it to record her reaction to the day. For instance, line seven on the glass indicated "Day High" or a very, very good day. These early efforts with ordering principles were echoed in the colored grids on Jessica's heaters, dials, and blanket controls. The color grid eventually became a compositional anchor for her art.

First Blooms

Jessica also explored different subjects during this time, as she continued to work on the elements of picture making. Fascinated by railroad crossings, she created an abstract rendition for her brother in 1980. The tracks are vertical against a flat background. At this point, Jessica had yet to learn how to represent a scene realistically. Her perspective is askew, the tracks misplaced and the background a minimalist band of colors. Jessica set about "improving" the picture, largely by her own efforts. *The Railroad Crossing in Hoosick Falls #2, Nighttime* of 1988 reveals an improved perspective and introduces a largely self-taught artist who makes selective choices while incorporating unusual colors and imaginative skies into a naturalistic setting. The purple



The Railroad Crossing in Hoosick Falls #2, Nighttime, 1988

hill and stylized trees were not in the original scene. Jessica substituted them for houses and other buildings. The octagonal structure; however, caught her eye and is rendered in exotic hues. The starlit sky features a crystal-like diamond that represents the planet Venus. This 1988 rendition displays the marks of the budding artist, especially her imaginative inclusions, as well as a growing sense of perspective depth and dimensionality.

In the summer of 1983, the Parks visited Jessica's Aunt Adrienne in Brooklyn, New York. Dinners were invariably late at Aunt Adrienne's house, so Clara made sure Jessica had a sketchbook and pencils to occupy her. When Jessica found a set of glass doors—four panels with filigree patterns—leading to an outside porch, she knew she had found her subject. Jessica set to work and accomplished her drawing just before dinner.

Months later, in her Williamstown bedroom-studio, she produced the first of what was to become a major series of paintings. Jessica's love of repetition, an aspect of her autism, now became the exploration of a theme. Her inclination to compartmentalize forms and colors fit perfectly into the intricate pattern of the doors. Jessica's ability to mix and harmonize individual colors allowed her to combine many stained-glass effects with multiple variations.

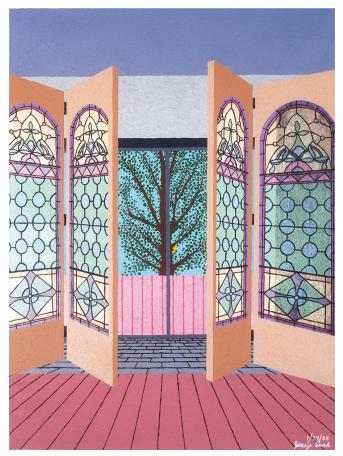
Her simple grid drawing, with its diagonal floorboards interrupted by strong vertical lines of the doors and horizontal features of the porch, provided a frame for the view outside. Here Jessica employed her observation skills and potent memory to represent variations in weather, time of day and season, and to explore another theme she was soon to embrace more fully—the skies beyond.

There is also a mysterious shadow on the far-right door that appears in the daytime versions. After much coaching, Jessica explained that the shadow was cast by a refrigerator on the porch. Jessica, especially fond of shadows, was drawn to details that fascinated her. So she included the refrigerator's shadow in these paintings. Like the foot in the drawing of David Park, did Jessica record the shadow to suit her need as an artist, or because it was there? Here, autistic literalism, once again, appears to coincide with the inclination of the painter.

The first 10 paintings of the doors were completed between 1983 and 1993, but Jessica has returned to the series from time to time, using the same worn drawing as her template. Having already given a set of doors to her parents and to her older sisters (Katharine and Rachel), in 2006 she did a 15th picture for her brother, Paul.

Jessica's repetition of objects she especially enjoyed suggested the work of artists such as Claude Monet, who painted the same trees, rivers and grain

stacks under different conditions of light and weather. But Jessica was not interested in the work of other artists. A visit to an art museum elicited very little response to the pictures and more interest in security-system devices on the walls. Jessica was focused on her inner world and the parts of the outer world that delighted or frightened her, or inspired her visionary sensibility.



The Great Stained Glass Doors #9, in Summer Near Sunset, 1988

A special note of thanks to Dale Borman Fink, editor of *A World Transformed*, and to Leon Peters who prepared this special layout for *The Mind's Eye*.

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A Storm of Exceptions: On Being a 21st Century Artist-Teacher

BY GREGORY SCHECKLER

"Character, like a photograph, develops in darkness."
— Yousef Karsh

That boulder has something to say

In the middle of my college studies, I studied for a year in Innsbruck, Austria. Inspiration sparked: European art isn't always well-lit and hush-hushed in rarefied museums with "hands off" signs. It's on street corners, inside restaurants. You can't avoid it. This became a reality one day when in Italy, reading a guidebook while looking for unfinished Michelangelo sculptures, I suddenly realized that the boulder I was leaning on was an unfinished Michelangelo sculpture....

Seeing great artworks in person sang the tone of quality, the timbre of seeking excellence, the storm of action. Michelangelo, Leonardo, Botticelli, Masaccio—possibly the healthiest education is raw travel. Bring a sketchbook. Get off the standard curriculum: go sit on a Michelangelo.

Indeed, if your idea of an art class is learning a discrete set of measurable techniques from an expert artist, you don't need college. You can get good, step-by-step lessons from free, online videos. College provides good directed lessons, too, and more; arts-interested peers, studio time, facilities you might not have access to, interactions with non-arts disciplines, chats with successful artists, and wild art parties.

All the waiters are actors

Not too long ago a painting student asked me, "How did you become an artist?"

So, I told her how I used to sell toys. Then I mentioned how I got fired for stocking beer wrongly at a convenience store. And how I'd also worked as a camp counselor (how to tie knots), a wiring installer for computer networks (how to avoid knots), an insurance claims processor (untying knots), and a state park summer laborer (cleaning latrines).

One year, I cut onions at 5 a.m. for a pizza joint under the tutelage of a longtime employee. I was too busy crying. She used to say, "Hey cracker, boy you gotta toughen up!" Between tears and oniony snuffles, I'd joke, "What kind of cracker? Saltine, Triscuit, or Wheat Thin?" To which my boss would reply, "Aww honey, you just another crybaby cracker!"

My student wasn't thrilled by these responses, and persisted, "But how did you become an artist?"

One of my favorite art professors used to be a milkman. He was also, for a short time, a professional boxer—and also an exhibiting artist, a student, and eventually, an art professor. If we are to understand that art and life relate to one another, then all of those activities—having a life—are important parts of being an artist.

Yet being an artist isn't just a job. For some it's not a profession. Being an artist is more of a visually-based livingry; sometimes a joy, and often a persistent intrigue. How then can we describe who is an artist?

The definition of artist ought to be more like the law of gravity

Art-making is the defining act of being an artist. Being an artist is a lot more than making art; and along with the making, one survives and gains ways to make more good art. Sidelines include the continuity of the art-making, the desire to improve—even the interpreting and presenting of the artworks—and if needed the dreaded non-art job to help pay the bills, as well as all the other trappings of modern life: acquiring food, housing, transportation, good solid friends and family. But pulling at the center is always the art-making.

Does one ever *become* an artist? I'm not sure. A beginning: childhood, drawing pictures. The scene: a basic American living room. The floor, covered with drawing paper, crayons, and me and probably my brother and sisters making up images, scribbles, wayward games. We drew pictures at so young an age that I cannot recall a time when we weren't scribbling; was there a moment when

we children were not artists but then suddenly became artists? Wasn't the center always pulling at us? And if making art is the base definition of being an artist then, by all means, at some point in our lives aren't we all artists?

Just like how you are always in the middle of being an artist, making pictures seems more a natural series of progressions. I like the way photographer Edward Weston positioned image-making as natural: "Consulting the rules of composition before taking a photograph is like consulting the laws of gravity before going for a walk."

I don't think he meant the artist shouldn't consult the laws of gravity; rather, that if you do, you should gain the deep feeling for composing just as you need to feel the gravity pulling through your center in order to walk.

Man oh man, look at that fear go

Gravity implies space. Space implies transit and time. Putting gravity, space and time, and transit together means sometimes we fall flat on our faces.

I am not a man of faith. I do not feel I have to "believe" that art is my life's work, nor do I make choices on the basis of blind adherence to unprovables. If you're like me, then as an artist you weren't wholly confident when you were beginning your artworks, but you dove into a life as an artist anyway—you knew it was possible because other artists had done so, and you could make some art, so, you dove in. And since the art-making urge is a natural force that centers like gravity, maybe it isn't entirely a choice, but from darkness an utterance. How can you not create?

Some people manage to insert gravity into their life's work. My first professional art shows were in the late 1980s, while I was a college student. These were conscious choices. Much earlier I'd been in art shows, contests, and even sold cartoons of skiing penguins—\$1 per cartoon—to my classmates back in second grade, without much forethought. But the idea of doing this consciously for me was in the late '80s, during that telltale time in one's education that hits many students when they suddenly realize that college soon will be over, and they now need a way to survive.

I was full of fear and doubt about this. Today, in 2013, I still have doubts and moments when it seems reasonable to give up. This is not unusual: because they make more artworks than anyone else, artists probably also encounter more art-related fears and doubts than those who do not actively pursue art-making—and more rejection, more letdowns, and more of the ups and downs of exhibiting.

I feel almost exactly the same way whenever I ski the steeps. Peering over the edge of the mountain sometimes I think, "Gee, this is stupid," and "Wow,

this must be too dangerous to do." Sometimes this is more of a whine: "But I don't wannnnaaa go there!" Sometimes I choose not to. Sometimes it really is too dangerous (at least I can take my skis off and walk down the mountain). Sometimes I ski anyway and find a great patch of powder that wasn't visible from the fear-inducing precipice. Sometimes none of my skills work together and I flollop around, and fall flat on my face. All good skiers fall. The more you practice the less it happens, but it still happens. If you'd like to rubberneck at an accident you can see me fall online, in this video (at timestamp 0:52 http://www.youtube.com/watch?v=_PnqFXAmLfk).

Let's just say there's more than one way to get down the mountain, and they aren't all in a direct line. So you bring your fear along with you and know that, once in a while, it'll demand some extra attention. One big secret of adulthood is this: usually nobody else notices any of your inner fears.

Get your 10,000 early if you can

One often hears that it takes 10 years or 10,000 hours of solid practice, play, and attention to become truly good at any skill: a sport, a musical instrument, being a doctor or accountant. So if you start that interest when you're young, by the time you're in your 20s, you might just be good at the skills. It's never too late to start, but the kids who started early gained some serious skills much earlier than adults who started late.

When people become accomplished in the arts we say they're talented. As in, "Gee, I can only draw stick figures, but you draw so beautifully, you're so talented!" But behind the mystique of talent are thousands of hours of practice; not just any practice, but the art practice: the persistent making and exploration of images with a mind tuned toward the qualities of expression, provocation, honesty, beauty, illusion-representation-allusion—the stuff of visual poetry. Michelangelo had an ornery way of saying this:

If people knew how hard I had to work to gain my mastery, it would not seem so wonderful at all.

Fortunately, Michelangelo's sour characterization isn't the entire truth of making art. Artist Sol LeWitt added:

Your work isn't a high stakes, nail-biting professional challenge. It's a form of play. Lighten up and have fun with it.

In both cases, whether it lights torturous flames or incendiary play, the image-making remains central. Personally, I think the more playful attitude is the better.

Your main squeeze

The focus is on the making; the making is sourced by the artistic practice. Thus my college art syllabi could reduce to "Make art, talk about art, then make more art."

Obviously, we cannot have practice without theory, action without interpretation, presenting without marketing, and making without a medium—and therein are many thorny art educational issues. (Which theories? Which interpretations and from whom? Which media and what techniques do they require? What kinds of marketing and to which parts of the world? What subject matter, style, or outlook?) But these puzzles mustn't eclipse the centrality of the art-making. On this issue, Leonardo da Vinci's words strike a chord with me: "The supreme misfortune is when theory outstrips performance."

The same is true of teaching. H.L. Mencken, ever the rapier wit, snarked that "A professor must have a theory as a dog must have fleas."

Indeed, too much reading of art history or theory will not make an inarticulate painting more subtly crafted—for that, one must paint. Artists aren't just sports super fans who know every statistic of every game but who can't throw the ball. Instead, we know a lot of the sport, but we throw. We run. We paint. We draw. We photograph. We design. We animate. We provoke... and most often we learn by doing.

As such, being an artist is far more than showing up for an art class and making a painting. It's much more than being an art major in college. It is in the making, in the athleticism. It is in the engagement with a long-term, ongoing practice. It is living the painting, squeezing the colors out of the tubes that are your deep experience and imagination of the world, poured out to build new imagery. In a moment of desperation one of my teachers quipped, "Grab the goddess of creativity and hug her hard until she turns into more paint."

No one true path, yes superhighway interchange

Do you, the artist, have a purpose? Gawd, I hope not. Nothing could be narrower than being on just one singular mission, nothing more stultifying than to have no choice about what you will do; nothing more disappointing than when that narrow mission just doesn't work out. In contrast to a singular mission, I bet you have lots of roles throughout any given day, and that, as you age, your ideas and mind will change, and so will your main activities. If you're an artist, then you have some choices about when, how, and what kinds of art you make; your art interests might change from year to year, and you can choose not to make art, too.

The wonderful photographer Arno Rafael Minkkinen likens the many choices we artists face to taking busses from the Helsinki Bus Station—imagine each bus line is like a year in your life as an artist; you get on the bus, and realize another bus line is going the same direction. This means that some other artist is doing what you're doing. This could be a good coincidence, or an annoying connection. But your own deep artistic interest is in the differences between bus lines, in the fact that Bus 71 may share some of its route with Bus 22, but eventually it goes to a different destination. It branches out. "It's the separation that makes all the difference..." and there at the separation is where artistic breakthroughs might happen, where you on your bus start to find an interesting new vision, a new direction. ("The Helsinki Bus Station Theory: Finding Your Own Vision in Photography" by Arno Rafael Minkkinen, for petapixel.com at www.petapixel.com/2013/03/13/the-helsinki-busstation-theory-finding-your-own-vision-in-photography/) Indeed, diversity and plurality and new directions are fundamentally important parts of the visual arts, not merely doing what everyone else has already done.

When do you get on your own bus? These days I try to start every day by making a quick drawing or painting. I wake up, fix breakfast, feed the cats, and make a sketch. No rules, except for how it's good not to check email. Don't play video games. Don't turn on the news. Don't read a book. Make the art. For me, art-making right away sets the tone for the day: creativity is the beginning.

Probably somewhere in that activity is some sort of grand philosophy "creativity is the beginning." But it seems to me to be more of a commonsense doing. And there's no pressure to perform, no high-stakes deadlines with these small, generative sketches.

The intoxications of your teachers

Good art schools provide many good teachers. But how do you teach the creativity that deals with the visual arts? Examples: my first college art course in drawing was provided by a senior professor in the art department. His syllabus went like this: get some paper and pencils, and let's make pictures together.

No spreadsheets. No rubrics. He was sneaky. He introduced a great many techniques and traditions with a sly smile and a "Gee, what if you tried this?" attitude. There was never any indoctrination, there were no high-stakes exams, and yet there was more learning than in any course I'd ever taken. If he wanted to teach toned-paper heightened drawing, he didn't assign it; he just arrived with some toned paper and gave it to students and we drew, and

then he wondered what would happen if we added some light chalk, or white paint? How would that work? He asked questions, and snuck learning in on the side.

He piled one giant still life in the center of the classroom: toys, dolls, antique casts, chairs, locks and chains, bicycles, mirrors, old paintings, flickering lanterns, and live nude models wearing thigh-high leather boots and Venetian masks, moving or standing or sitting wherever they wanted, sometimes immediately in front of you blocking your view of everything but their, umm, specialties. The affect intoxicated and mystified, like walking inside Plato's Cave of the mind.

The silent treatment

My first college art teacher had a colleague who also taught some of the painting courses, who never spoke. But he smiled or shrugged at your paintings; he painted with you. His approach was unstructured and rigorous all at once. And realistic, in that when your art is on display in the museum, people look, shrug, chat with each other maybe a little—but mostly if they like the art and find some interest in it, they look more and talk less. Nonverbal interaction is to visual art what grammar is to literature.

With this kind of exploratory art-making it's not possible to know ahead of time what the outcomes are going to be: the painting isn't finished until afterward. Artists tend to look forward, act in the present, create. And because you don't know what the outcomes will be, from this view it doesn't make sense to plan a course too much, other than to recognize we will make art together. Not all art professors are like these first two (I'm not) but I've always kept their open-mindedness and sneakiness in mind.

A visual rigor

A counter-example: a well-known professor's approach was structured. We drew with conte crayon and line only, creating intense anatomical studies of the human nude. We did this for two semesters. No erasing, no hesitancy; all form and roundness and rigorous proportion. For readers who haven't done much figure drawing, it is a difficult task; more so if you cannot erase, even more so when every line must flex into the depth of space.

His final exam was to create two life-size drawings of a skeleton, in about two days' time. Every knurl, every joint, every form positioned and proportioned. Have you ever had an exam that lasted for two days? Have you ever had an exam where the goal was not to give the right multiple choice answer or essay response, but to draw a superb, precise picture?

Drawing on the cave walls

Students spark each other's motivations because students have the best parties. Ours often went like this: cover all walls with blank paper. Give everyone crayons. Get buzzed. Draw whatever the eff you want.

We drew leeches sucking the life out of unsuspecting supermodels, we drew Batman, we drew airplanes and trees and butterflies and unicorns and a lipstick-smeared clown named Mr. Statue of Liberty. I'm not sure any of it made any sense. But somehow this inspired us... an almost endless supply of creative pursuits that may have had nothing or everything to do with enlivening the walls as if we were modern cavemen.

Earning enough rejections to keep the recycling center in business

My first big rejection went like this: sorry kid, you're a wonderful artist but your art's not good enough yet for graduate school. My professors were as gentle as possible about this. But it stung: you're not good enough. Sooner or later every artist faces rejection. Mine seemed to say that the goal of becoming an artist is one big stupid lie. And yes, it's hard psychological work to turn that first big rejection into an opportunity; to recycle it.

So, I didn't do grad school right away, and instead transferred into a bigger art program for more experience. Thus from that first big rejection I gained two more years of undergraduate studio time, in a focused community of painting students.

Do artists ever get used to rejections? After a while the rejections seem to become part of the iron wall that is some of the mind of the artist who insists on continuing to be an artist. They recycle more quickly. It's as if, like an arcing Richard Serra sculpture, the artist has an oversized rusty metal wall in mind, immense and immobile, insisting on making art, placed just so at slightly disorienting angles in order to direct you and the artist ever-onward to flashes of light and beauty.

Need more opportunities to become an artist? Get more rejections!

Vampires of the arts

Eventually, I built a strong enough portfolio and went to New York City. This was sort of a disaster. I was a student there for a while, attending a narrowly conceived figurative art academy disguised as a graduate school, and also was dogged by frequent migraines and fatigue and their attendant hallucinations. New York is such a lively place that I am still not sure if there was a parade of a thousand bunnies down Broadway led by a troupe of blue-skinned contortionists.

During that time, Jean Michel Basquiat's work was presented as a retrospective at the Whitney. What awesome art! It was full of vigor, color, wild brushstrokes and witticisms, meanderings, cartooning. I loved his show, and made the mistake of mentioning it during graduate school art critiques.

If you're unfamiliar with the typical art school group critique session, well, consider yourself lucky. Critiques are by far the worst teaching technique ever invented. They go like this: you put your carefully-wrought artwork on display, and then everyone opinionates about it until you barf and cry. Too often college art critiques are a form of institutionalized bulimia.

The mention of enjoying Basquiat struck horror in more than a few of the professors, and some became angry, so much so that the critique never discussed the artworks we had put on the wall (thank goodness!), and devolved into professors debating each other about their own parasites theories. (H.L. Mencken was right!)

The problem was this: having struggled for years to bring more and better attention to their own figurative artworks, the professors for the most part hated the anti-establishment artworks of people like Basquiat, who had gained the money and prestige that the professors had never accomplished. Such is the life of many traditional realist painters: full of jealousy about all the other artists who gain fame and fortune while their own terribly difficult realisms do not.

There's sort of a priestly attitude about making a lot of fine figurative art, an attitude that too often derides other kinds of art, and which requires its adherents to believe themselves on a holy mission to preserve or renew the best of old art traditions. It strokes the ego: we are so good at this that we're truly carrying on Raphael's legacy! (Or Caravaggio, or Bouguereau, or whomever the figurative painting hero of the day is.) As if they even come close to Raphael's vision....

In other words, there are vampires in the art world who will try to suck the life out of you, force-feed you their blood, and turn you into a follower and maker of their art style (not your own art and interests, of course, but *theirs*). Such exclusionary, insular tactics and teachings are best avoided. They have very little to do with what it's like to work as an artist outside of academe.

Many survive quite well without fame, thank you

A good chunk of being an artist is figuring out how to survive. And after graduate school, having decided not to pursue teaching right away, it was time for me to just be an artist.

I wasn't ready for this. Following graduate school I was deeply dissatis-

fied with much of the art I'd made, and I didn't want a job. In fact, I was unemployed for about a year after graduate school, selling the occasional painting and using up all of my savings until I was so broke I had to get some sort of job. The main job that made survival possible was managerial work at a gallery.

Some of the gallery's artists pulled in tens of thousands of dollars in gross sales every year—all at a small regional gallery far off the New York / L.A. art radar. That fact was enlightening in and of itself: there are plenty of artists who survive—and survive well—but who are never in the famous big city art publications, reviews, galleries, or museums.

Some of these artists could have survived off of sales from our gallery alone, but the more popular ones all were in many more than one gallery. They diversified, they sold well; they earned good livings. Many of them produced gross sales of as much income as a decent doctor or lawyer.

It's not about you, it's about them

Working in a gallery taught me that selling art isn't about what you, oh holy artist, love about your artworks. Nor was it about what you, oh great salesman, think is worthwhile art that you'd love to have in your own personal collection of awesomeness. It is about what clients need and want—what *they* like, and what *they* find interesting, and whether or not your art matches into *their* interests. The job of selling art is to figure out what they need, and then find ways for what you have to offer to meet their needs.

Also, markets differ. What sells in one market may have no effect in another. So as an artist, you have to match your art to those portions of the art world that can interact with and support it. Do you make large, Expressionistic concept paintings with a touch of Pop Surrealism? Great, go for funkier parts of the New York City gallery scene. Do you make gorgeous, realistic portrait paintings? Awesome! But get yourself a portrait agent to contact clients and gain commissions. Are your drawings charming cartoons of skipping bears? That's cool! Sell them to a children's book publisher. You have to be assertive about this: focus in on the markets that work for your artistry. The art world is so vast I have no doubt that, no matter what artwork you create, there can be a market for your work. But, not every market will support every artist.

The spectre of job security always whispers sweet nothings

Sometimes it seems like everybody wants tenure. It includes some unusually reliable job security. Job security can mean a decent paycheck, which

certainly helps one to weather through the unpredictable nature of art world fashion trends. But it also can breed something terribly negative for the artist: you can get too comfortable, you can lose your edge, you can cease being desperate enough to do that extra bit of work your painting needs in order to be of the highest quality. And all that teaching and committee work is time you're not in the studio and not marketing your own work: which is great if you love teaching and are good at it, but a demon-in-waiting if you're only a teacher in order to be an artist, or if you just get tired of teaching.

Meanwhile, the real function of tenure actually isn't job security. Tenure means that your boss can't force you to teach creationism during your contemporary evolution course. Tenure is fundamentally about academic freedom and the responsibility to provide truthful teaching despite the political whims of leaders who, more often than not, know nothing of your field of expertise. The protection of tenure is against ignorant bullies who get roles of power. But I have yet to meet an administrator who is a bully—so the protection seems based largely in fear, rather than reality.

So the challenge, then, of having earned and acquired tenure, is this: how to refuse complacency; how to maintain your creative edge and keep exploring, keep building interesting artworks. And it just so happens that this challenge is not a result of tenure, and is the same challenge faced by many artists.

Art, it ain't rocket science, and other stereotypes of art teaching

So, you're going to make some art. If you're a student, your parents are probably worried you'll starve and never have a reliable job (I've never had one either). If you're an art student's peers, you may be thinking art is easy and that you should go into art because, well, you're not quite smart enough for real fields like science, math, or—well, you know, fields where they have all those exams and stuff.

But the art will be an object, and therefore is physical, observable, experiential and highly objective. We can look at it, discuss it, and make more. The mere mention that art might contain and provoke truths and includes knowledge and aptitudes and verifiable experiences that we can share flies in the face of postmodern/poststructuralist beliefs about art's veracity, and also denies the stereotype that art is subjective, gooey meandering. Sure, art ain't rocket science. We don't do double-blind or even single-blind studies, not really. Yet for all that, there are many reliable aspects of the arts that can be taught, even creativity itself.

I'm reminded of a BBC comedy—I think it was an episode of Mr. Bean—that involved an adult who'd returned to school for a few evening classes, who

found himself locked into an art classroom with a strange teacher: a fetching lass wearing a beret, speaking in a French accent, who pressed her hand on each student's forehead and yelped, "Inspire!" Then, students drew from a still life, as if magically inspired by the teacher's heartfelt emotional prompts. As they drew, she would stop them, change something in the drawing, press her hand on their foreheads again and yelp, "Inspire!" And then they switched subject matter and were presented with a nude, more "Inspire!" head-slapping, and much confusion all around as the students gasped agog with stupor and drooling, embarrassed. It was good comedy, reflecting the inarticulate, emotional artist-teacher who attempted to magically make and inspire new art out of thin air.

And this is not how I teach. First of all, I don't have a beret (only because I'm too cheap to buy one!). Secondly, there are skills and concepts that students can learn that are concrete, learnable, and inspiring, and that don't require magical thinking: tone, value, color, form, representation, metaphor, composition, art histories, creative process and problem-solving, art materials and the subtleties of their use, and much more. But at some point we do just sort of make stuff out of raw inspiration and magic.

What an art professor really does

As an art professor, I deal in imagination and art-making. Despite all of the fancy jargon you can read in college catalogs about what's in an art class, for me every class basically goes like this: make pictures; look at, read about, and talk about pictures made by each other and by other people; and make more pictures.

Hopefully within that small cycle we attempt to make not just any image, but truly excellent pictures. As such, good craft matters. Technique matters. Knowledge matters. Ultimately, making pictures is about creating meanings and living worthwhile lives. Sometimes.

But we artist-teachers, still we go all dada

Every semester there's always at least one student who drives me nuts. About this student the best attitude might be the disarming zen koan.

I should know, I was that student sometimes; at times bullheaded, sloppy, inattentive, so enamored of my own art hat I refused to learn the teacher's lessons. Now that I teach, I see this kind of thing all the time. It goes like this:

Student: Sorry I'm late. I'm worried being late will affect my grade, but you see I just can't eat dinner fast enough to get here on time. *Teacher:* You can be early, on time or late, but class starts at 5. If you

arrive late it's your responsibility to make up whatever you missed.

Student: Oh cool, so I can be late. *Teacher:* (drops head into hands)

Student: How come you gave me a bad midterm grade?

Teacher: You didn't turn in over half of the assignments. I can't

provide a grade for work you didn't do.

Student: But I attended every class.

Teacher: Yes, but did you turn in all of the assignments, half the

assignments, or less than half?

Student: Less than half, I think. But I deserve a passing grade.

Teacher: Um, no.

If it's any consolation to the students who might be reading this, there's also every semester at least one teacher who will drive the student nuts. I should know; sometimes I am that teacher. Oh, and there's also always at least one administrator who drives the teachers batty. What comes around goes around, or something, but apparently with increasingly greater pay rates along the way.

Sometimes I think it's best just to respond with non sequitur. Cut to the nonsense since that's where we're going anyway.

Student: Sorry I'm late. I'm worried being late will affect my grade, but you see I just can't eat dinner fast enough to get here on time. *Teacher:* Have you ever worn two sets of mismatched socks on the

same day, two sets?

Student: Wait, huh? What?

Teacher: The route to New Jersey includes lemons and shoe horn.

Student: Um, errrrm, doh.

Teacher: A goat flies over the bacon! Snnnuurrrg!

The line cook at the local diner is a professional

Most of my students and I started out as lovers of art, very interested and engaged with images and metaphors and meanings. The definition of amateur is "one who loves," from the Latin *amator*, meaning lover. Doing art because you love it means you are an amateur.

Doing art in order to earn money is being a professional. Many professionals love their craft, too; but they do the craft to earn a living. Should it be the effect of the college degree to push students away from being amateurs and toward being professionals? Let's not be too quick to dismiss the impor-

tance of the amateur's attitudes, nor too quick to overestimate the quality of the professional.

The line cook at the local diner is a professional cook. We don't know anything about the quality of the cooking merely on the knowledge that the cook is getting paid. On professionalism, think about this: is every lawyer a great lawyer? Is every doctor superb? Of course not. We all think we're better than average, but that isn't statistically possible. Someone's not average. And someone who gets paid to do a job may be below average, and yet still be paid. Not every line cook is a great chef.

And some amateurs may be far above average in terms of their skills, knowledge of their craft, the art world, and art history. Some amateurs might indeed be more informed than the professionals who earn a living but have lost the love of their work, and as a result of the depth of their love some amateurs might indeed make higher-quality artworks than the professionals.

A quick glance at any of the better photo-sharing networks online today demonstrates this fact almost instantly: a great many amateur photographers make fantastic, precise, and intentional photographs as good as any professional. Conversely many professional photographers really are nothing more than lucky snapshot-artists who happened to be at the right place at the right time. Some pros are the paid, but uninteresting, line cooks at the local greasy spoon. Not always, of course; some professionals are outstanding artists. The same is true in painting, illustration, design, writing, film, and many other creative pursuits. Some bestsellers are hacks. Some bestsellers are artistic geniuses.

Meanwhile, more than once in recent years we've seen the entire art market turned upside-down when an assertive amateur who's made some great work gains online attention, goes viral, and then gets in the hottest galleries and museums. It's a very exciting time to be an amateur or professional artist, and we all have access to vast markets and hugely valuable marketing engines across the Internet that didn't exist twenty years ago.

Backwards thinking is no great economy

One sign of community's ineptitude at handling great art is when the managerial, community, or other interests are not on the art, but on some form of economy-building or investment portfolio. Sometimes it's called "The Creative Economy." When it distracts away from the art, the creative economy is an empty shell of an idea that ends up peddling fiberglass sheep or cellos painted by school kids, as if that were the best of our community's creativity. One nightmare is that maybe such awful crap actually is the best that our communities can muster.

The storm has begun

And along with that shift between amateur and professional, and art and economy, a storm has begun—actually a storm is well underway and we can only hope to survive it.

I read somewhere that, in one day, over 380 million photos are uploaded to Facebook. Surely most of these were casual snapshots of no artistic merit, but fun to look at and share anyway. How many might qualify as fine art? Perhaps 1 percent or 1/1000th of 1 percent? That's still a few hundred *every day*, thousands and thousands in a year, on only one of many social networks across a much larger World Wide Web. In one day, the images uploaded to the Web total more images than the entire known history of art.

Every art history book ever made contains none of this new art

And it's so much new art that probably never enough of it could ever be contained in one book to tell the story of 21st century art. We're recording and "artifying" everything, but we are doing it at such a great pace that we can't keep track of most of it. And we must update Karsh's comment that character, like a photo, develops in darkness. That comment makes sense in the context of old-school, wet-chemistry darkroom photography. But in the digital age, it is character borne of light turned to electrical impulses, 1s and 0s. Character, like a digital photo, develops in flashes of millions of lines of code. This storm is a raging hurricane with meteor strikes and massive tsunamis, and, within them all, cameras and code are everywhere.



"Snowstorm: Shadows inside Lights series" 2013, digital multiple exposure photograph.

Enter the storm of exceptions

The storm of new art imagery engulfing the planet is so large that, to be an artist, there is no simplistic, straightforward canon of information to be taught, indoctrinated, tested or verified.

Within a particular tradition or style of art there certainly are many expectations for form, concept, and levels of quality. But across styles and methods, much of the arts are idiosyncratic—not merely subjective (after all, visual arts objects are right in front of you: objective as real physical facts, which of course, objectively, you may find you like or dislike). Some traditions like the realist painting I specialize in are very well codified. Others are totally exploratory and unpredictable.

Some art isn't even made by humans—well, not exactly. Just yesterday in one of my classes we viewed a documentary photo project involving a tiny digital camera carried by a cat. The cat takes the camera wherever it goes, and the camera is programmed to take pictures at regular intervals. While a person programmed the camera and mounted it on the cat's collar, the cat did the moving, and the camera took the pictures on its own. So who's the author, who is the artist? And yet the resulting photos are fascinating, showing many views of the events in the cat's life. And often the images are beautiful, lowangle photos of the world. In such cases, authorship is questionable, which makes entire swaths of art educational dogma into irrelevant restrictions.

Despite the persistence of national curricular standards for high school art training, there is always another art culture to learn from that wasn't included in the curricula, always another artist somewhere in the world who has made an interesting, provocative artwork that is completely different than whatever the predominant modes of the day are.

I am not arguing here for relativism—far from it. I'm simply recognizing the observable art world fact that there are thousands of art styles, and thousands of art traditions, which have widely varying purposes and aesthetics: the art world is so diverse that outside of the demands of a specific art style, any dogmatic art curriculum is immediately suspect. Art manages to be a vast group of things that, despite their commonalities, are each a storm of exceptions.

How do you become an artist? One way is to enter the storm. The preeminent experimenter, British seascape and landscape painter Joseph Mallord William Turner is said to have strapped himself to the top of a mast of a clipper ship during a storm, so that he could learn to feel what it's like to be inside the weather system. He rode out a fierce thunderstorm, with waves breaching over the gunwales and smashing down the sails. He survived. Then he painted pictures of it. If he had written stories inspired by the experience, he would have been a writer, not a painter. The choice is utterly simple: Painter, during this storm, which brush will you use for today's painting?

Undergraduate Happiness: Some Preliminary Field Notes from the Classroom

Presented at Eastern Sociological Society 2013 (Boston)

BY JENNIFER ZOLTANSKI

Abstract

In this paper, I present field notes on the levels of happiness among past and current undergraduates, drawing on materials developed in my seminar on the sociology of happiness. While the primary purpose of my course is to examine interdisciplinary research on happiness, students complete a number of written assignments that allow them to connect their personal experience to larger societal arrangements and to apply the lessons of academic research to their own private lives. In this paper, I discuss preliminary findings on their subjective wellbeing, and what these findings might reveal about general college student happiness today. Analysis of my data suggests that MCLA students are less happy than the average middle-aged American, but that this is due more to age than the particular college they attend.

Introduction

Massachusetts College of Liberal Arts (MCLA) is a public, four-year institution located in North Adams, tucked away in the bucolic, but frigid, Northern Berkshires. Situated roughly three hours west of Boston, four hours north of New York City, and three hours south of Montpelier (Vermont), MCLA is located at the western-most edge of Massachusetts; a spot I like to call the Bermuda Triangle. Although I have not assessed the affect that location may have on happiness, I think it fair to say that North Adam's size (roughly 13,000 residents) and remoteness pose particular challenges to adventure-seeking, young college students. Although North Adams is home to MASS MoCA (Massachusetts Museum of Contemporary Art), it has few coffee houses (one, or sometimes two, depending on the season), even fewer music or dance clubs (zero at last count), a narrow range of restaurant choices (all of which close down by around 9 p.m.), and few opportunities for retail therapy. These constraints make for a fairly subdued campus, where extracurricular student clubs and activities seem to take precedence over raucous partying.

This is my fourth year at MCLA as an assistant professor of sociology. I teach a range of courses, including those on criminology, law and society, genocide, social movements, and social problems. Recently, I designed a course on the sociology of happiness that I have taught for two consecutive semesters, with a total enrollment of forty students. Because it is an upper-division seminar class, students have been junior or senior sociology majors. Mirroring the College's broader demographic characteristics, they have been largely white, female, and mostly first-generation students. (MCLA demographic data indicates that 79 percent of students are white, 59 percent are female, and 77 percent are residents of Massachusetts. A good number are first-generation students.)

The happiness course takes an interdisciplinary approach to analyzing how wellbeing is defined, measured, and achieved. Students examine theoretical and empirical studies from a range of disciplines; including philosophy, sociology, anthropology, psychology, biology, economics, and public policy. Throughout the semester, they complete multiple writing assignments that allow them to connect their personal happiness to larger societal arrangements, and apply the lessons of academic research to their own private lives. So far, student work has served two purposes: first, as a basis for grading their performance, and second, as a valuable data set on college student happiness.

Is it me or is it them? College student malaise

Few college professors have deep insight into the subjective wellbeing of their students. Professors may care deeply about their students, but their general happiness does not factor logically into courses on history, political science, chemistry, or other academic disciplines. At the same time, the work of teaching is intrinsically linked to our perceptions of student wellbeing. Admittedly, we strive to design and teach magical classes that tap student interest and generate enthusiasm for subject matter. Yet, during much of my teaching career, I have found myself in a grey zone. Maybe I am simply neurotic, but at some point in every semester, I find myself asking the inevitable: "What is going on with my class? The students seem so miserable! They have become unreachable! Is it me or is it them?"

Like most committed teachers, I have assumed the brunt of responsibility and developed strategies to try to reach them and turn things around. Sometimes my efforts simply don't work, and I ride the semester out with my grumbling students in tow. I hear similar reports from my colleagues at MCLA, and also from professors at colleges and universities around the country. Professors complain about students; students complain about classes and the professors who teach them. The website "Rate My Professor. com" provides evidence of this fact. My recent interest in student discontent has grown out of this conundrum, but with the goal of identifying the underlying sources of student malaise. Are students unhappy because of college or did they come to college as unhappy people? Put another way, is their discontent valid or is it displaced?

Is it possible that professors work with an inherently unhappy population in the first place, so that even the most gifted and mystical teacher could not conciliate them? I designed the happiness course with this in mind. Armed with a thick course packet, happiness inventory and college student stress tests, a positive psychology challenge, and techniques for assessing economic happiness, I set out both to teach and to explore the terrain of college student happiness. As noted previously, my data suggests that yes—college students appear to be less happy than the average middle-aged American. At least that is how the ones enrolled in my happiness course at MCLA appear.

Measuring happiness

What is happiness? We use many different terms to talk about this emotional state, including "wellbeing," "life satisfaction," "subjective wellbeing," "flow," "contentment," "joy," "emotional wellbeing," "bliss," and others. In her book *The Pursuit of Happiness: An Economy of Well-Being* (2011), author Carol Graham succinctly points out that "happiness" is perhaps the most open-ended and least well-defined of the terms, although it is the one that gets the most public attention and interest. The term also appears in the United

States' Declaration of Independence" (p. 5). It is hard to imagine the Declaration without the word "happiness." Imagine the founders arguing that we all are entitled to life, liberty, and the pursuit of "contentment," or "life satisfaction" or even "bliss"! Perhaps they chose the term "happiness" precisely because it is vague, open-ended, and applicable to "all men" (today, taken to be understood as "all people"). Happiness researchers have not had it as easy. They have had to get very precise about defining this slippery concept in order to measure and study it as accurately as possible. Put another way, in order to get closer to understanding the contours and sources of happiness, they have had to develop solid operational definitions of it. And they have. Today, researchers tend to agree that the most valid way to measure "happiness" is to allow people to report their own wellbeing in different domains of their life; including health, work, housing, relationships, parenthood, education, and more. Positive psychologists in particular have specialized in devising surveys (also known as happiness inventories) that allow respondents to assess their own state of wellbeing in these and other domains. Numerous happiness websites now exist that do exactly this, including the University of Pennsylvania's "Authentic Happiness" site, which boasts "more than two million users from around the world." (www. authentichappiness.sas.upenn.edu) Users can log in and complete dozens of inventories that measure their own life satisfaction, social connectedness, and life purpose, to generate stand-alone happiness scores and/or evaluate their score in relation to their age, gender, and professional cohort. Even better, websites such as this have become clearinghouses of statistically valid databases for happiness researchers. A brilliant idea to say the least: allow people to evaluate their own happiness while simultaneously gathering and maintaining a dataset on happiness from a large, randomly sampled group of people, from all walks of life. As a result, positive psychologists are on the cutting edge of both understanding the sources of human happiness while also promoting its achievement.

Authentic or inauthentic happiness: that is the question

As noted previously, students in the happiness seminar are required to take a battery of happiness inventory tests and then discuss whether they believe their scores accurately measure their "wellbeing." I ask them to visit the University of Pennsylvania "Authentic Happiness" website to take three specific tests. These include the: 1) Authentic Happiness Test (measures subjective happiness based on experiences over the past week); 2) Satisfaction with Life Scale (measures feelings of contentment with work, friendships, life purpose, and more); and 3) Approaches to Happiness Questionnaire (measures

pathways to "happiness," and the degree to which people "love their life"). They also complete one additional test of their choosing (which have ranged from "The Character Strength Test," "The Compassionate Love Scales," and "The Depression Test," to "The Perseverance" or "grit" test). Students present and discuss their test scores in class, and also write a reflective essay about the perceived validity of their scores.

Curiously (or maybe not so), students tend to downgrade the accuracy of the tests and their own scores when it suits them. Consistently, they point out that the questions are either too open-ended or vague to "accurately" capture their state of being at the moment they took the test. A common complaint that students make goes something like this: "My test scores were way lower than I expected! How can anyone expect to measure anything as complicated as happiness? It is just too subjective—everyone has his or her own definition of it! It's up to the individual to decide. There is no way to measure it! These tests are stupid!" Better yet, students report that they figured out ways to "outsmart" the assessment tests—answering questions more often in the affirmative than in the neutral or negative, then miraculously obtaining higher scores than they would anticipate. Humorously, they go on to fault the test designers for not being attuned to "the tendency" for respondents to exaggerate. Yet, in the end, they seem completely oblivious to the fact that they have only outsmarted themselves! After all, the tests are designed to help respondents gauge their own state of wellbeing as accurately as they care to; the inventories are tools of self-awareness and potential self-improvement, not tests in the strict sense of the word. Perhaps this ambivalence to authentic happiness inventories can be taken as a gauge of general test fatigue (in response to nationwide efforts to "test and assess" high school readiness for graduation and entry into college), more than anything else. Maybe students finally have mastered the art of test-taking in spite of themselves. Whatever the case, one thing I believe this exercise teaches is that "happiness," along with most variables worth investigating, is indeed slippery and not something easily defined or measured. My hope is that, despite their cynicism, students come to appreciate that while these tests may be imperfect, they do get us closer to understanding a squishy human emotion we sometimes call "happiness."

MCLA student unhappiness

Preliminary analyses of my students' happiness test scores show some interesting patterns. Recall that over two semesters, forty students have taken the "Authentic Happiness," the "Approaches to Life," and the "Satisfaction

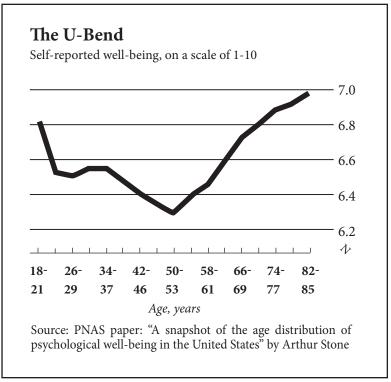
with Life" inventories. Their aggregate average scores on these tests are summarized below:

- 1. Authentic Happiness Inventory: Student average at 2.99 points (on a 1-5 scale) with a range of 2.46 to 3.54. Their average suggests that they are somewhat happy but slightly less so than their peer cohort.
- 2. Approaches to Life Inventory: Student average 2.84 points (on a 1-5 scale) with a range of 2.17 to 4.00. Their average indicates that they are somewhat content and en par with their peer cohort.
- 3. Satisfaction with Life Scale: Student average 25 points (on a 5-35 scale) with a range of 17-31. Their average indicates that they are just barely "satisfied," but come close to the average for people in economically developed nations. (Those who score 30-35 are highly satisfied, 25-29 are satisfied, 20-24 are slightly satisfied, and 15-19 are below average.)

At first glance, MCLA students (and their peer cohort) appear to be doing okay. They are not ecstatic, nor are they miserable; they are somewhere in the comfortable middle. Yet, the thing that strikes me about MCLA students (and their peer cohort scores), is that they are substantially lower than the averages of those of people in my age and professional cohort. My averages for all of these tests (like those of my age and professional cohort) range from mid-three up to five points. This difference corresponds with research that shows a strong positive correlation between age and happiness. Happiness levels drastically decline between young and middle adulthood, when they make a remarkable reversal. A graph of this across time would resemble a letter "U." *New York Times*' Nickolas Bakalar (2010) summarizes this trend nicely:

On a global measure, people start out at age 18 feeling pretty happy about themselves, and then, apparently, life begins to throw them curve balls. They feel worse and worse until they hit age 50. At that point, there is a sharp reversal, and people keep getting happier as they age. By the time they are 85, they are even more satisfied with themselves than they were at 18 (Bakalar).

Below, is an example of this graph:



The U-shaped age-happiness graph

Age and happiness are strongly positively related. Along with age, we know (intuitively) that college professors enjoy much more prestige, autonomy, and job security than college students; this helps to explain differences in happiness levels, but may make comparisons seem unfair. However, I see it a bit like comparing oranges and tangerines. Students and faculty clearly have a symbiotic relationship—students learn from us, but we also learn from them. They bring their contentment and "love for life" into classrooms, and vice versa. Ideally, if student and professor scores matched along the happiness continuums, classrooms probably would be more consistently lively and upbeat for both parties. Unfortunately, my experience with students often feels more like this exchange between Winnie the Pooh and Eeyore:

"Good morning, Eeyore," said Pooh.

"Good morning, Pooh Bear," said Eeyore, gloomily. "If it is a good morning, which I doubt," he says.

"Why, what's the matter?"

"Nothing, Pooh Bear. Nothing. We can't all, and some of us don't.

That's all there is to it."

"Can't all what?" said Pooh, rubbing his nose.

"Gaiety. Song-and-dance. Here we go 'round the mulberry bush."

"Oh!" said Pooh. He thought for a long time, and then asked, "What mulberry bush is that?"

"Bon-hommy," went on Eeyore, gloomily. "French word meaning bonhommy," he explained. "I'm not complaining, but There It Is." (Milne and Sheppard 1928)

College student depression and suicide

Preliminary analysis of MCLA happiness inventory data reveals that professors indeed work with a less-than-happy population. Rates of studentdiagnosed depression and suicide are perhaps the best (though extreme) proxy measures of unhappiness. Recent reports on these variables are in fact quite alarming. For example, the American College Counseling Association (ACCA) estimates that the number of students who seek psychological help has doubled in the past 12 years; roughly 37 percent of college students sought help for psychological problems in 2012, verses 16 percent in 2000 (DeMeglio 2012; Turner 2011). In a similar study, The American College Health Association finds that suicide ranks as the leading cause of death among college/university populations. An American Psychological Association study found a 10 percent increase in the number of students on psychiatric medications over the past decade (Dagher 2011). These reports suggest that students struggle emotionally with college life, and that this struggle manifests along a spectrum of mild to severe depression, which may lead to suicide. It would be good and useful to know how the happiness of MCLA compares with that of students at other similarly ranked schools. Because my research is in its early stages, I have not yet discovered comparative datasets.

Making lemonade out of lemons: the positive psychology challenge

Thus, research shows that student discontent is related to both age and college life. To reiterate, young people generally are less happy than middle-aged and the elderly. Most college students must deal with the strain of newfound independence, competitive academic environments, and homesickness. Those beginning to hone their professional careers also feel less secure, more anxious about confronting their futures, and are understandably less content than

those who have met these challenges and are figuratively "over the hill." This is not to say that all faculty are 50 and beginning the "happy" phase of their lives, or that all students are 20 and miserable, but rather that meaningful work, job security, and social prestige do bring greater contentment, regardless of age.

Bearing the fact of student malaise in mind, I introduce students to positive psychology and happiness. As a theoretical paradigm, positive psychology argues that the sources of happiness are individual and internal. Happiness is viewed as something we each construct in relation to our experiences in our external worlds (Deurzen 2009; Weil 2011). As practice, positive psychology argues that we control our happiness destiny by deciding how to interpret and manage our responses to our external social world. As a self-help model, positive psychology (for better or worse) instructs us that we are in the driver's seat; ultimately what matters to our happiness is whether we can make lemonade out of lemons. It all boils down to attitude. In an effort to explore and apply this perspective, students are instructed on a range of positive psychology strategies and then are asked to take the 5/5 challenge: choose 5 strategies and practice them for 5 consecutive days to determine if they are objectively and subjectively helpful. How? They revisit and retake the Authentic Happiness Inventory Test to obtain a baseline or pretest score. Next, they choose five workable positive psychology strategies and practice them each for five days (keeping a journal log of their activities), and then retake the Happiness Inventory Test a second time to compare results. As follow up, they write a formal essay that evaluates objective (pre -and post-test happiness inventory scores) and subjective (what they felt worked or did not work in terms of contentment) outcomes. Did they see an increase/decrease in their happiness scores? If so, do they feel that they can attribute the changes to positive psychology? I have kept track of what seems to matter to student assessments of positive psychology strategies. What follows is a summary of attempted verses effective positive psychology strategies (though not in ranked order):

Attempted positive psychology strategies

Physical exercise (30 or more minutes per day)
Gratitude list (three items per day)
Cut TV viewing by one half per day
Smile/say "hello" to a stranger
Daily act of kindness

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Have one good laugh per day

Talk to a friend (one time per day)

Spend time alone (half hour or more per day)

Growing/caring for a plant

Give yourself a treat

Go somewhere you have never been

Effective positive psychology strategies

Cut TV viewing by one half per day

Have one good laugh per day

Gratitude list

Spending time alone

Growing/caring for plant

Talk to a friend

Physical exercise

Go somewhere you have never been

Getting Eeyore closer to bonhommy

The positive psychology challenge produced surprising results even in the most skeptical students. After practicing strategies, nearly all students reported seeing increases in their Authentic Happiness scores, some more pronounced than others. Based on my analysis of their qualitative essays, students appeared to benefit most from strategies that allowed them to focus their energies on personal achievement and real (not virtual) relationships. For instance, many students chose to cut their TV viewing by one half. Some went further and cut Facebook and Twitter out of their lives for five days. Many confided that this was very difficult in the beginning (much like an addiction), but by day three they reported feeling liberated from the obsession with TV, Facebook and Twitter. In their essays, they reported that they had more time to focus on homework, spend time with friends, pets, and themselves, which gave them deep feelings of satisfaction. Talking to a friend reportedly improved their subjective happiness by increasing their sense of social connectedness—and allegedly improved mood and sleep patterns among those students who practiced this strategy. Spending time alone and physical exercise also were beneficial. Finally, many students reported that planting seeds or caring for a mature plant substantially boosted their perceived happiness. In my view, this practice gave them a sense of purpose and aesthetically livened up their sterile dorm rooms. These findings tell us something very important about the sociology of positive psychology: ultimately much of human happiness is in fact generated by activities that transcend the "individual," and instead figure very centrally on the collective—our relationship to others and how we derive a sense of individual contentment from this. Talking to friends, caring for plants, gratitude lists, laughing in the company of others, and cutting media time all act as exit routes away from the "me" toward the "we."

I have made it a point to explore student discontent in relation to the "American Dream" ideology. After all, we live in a society that emphasizes individual achievement and accumulation of material wealth. Could these pursuits produce unhappiness? Students learn that despite its high Gross Domestic Product (GDP) ranking (a measure of economic wellbeing), the United States ranks substantially lower in terms of happiness than nations that are organized around principles of collectivism or socialism. For instance, people in Costa Rica, Norway, and Denmark all rank as "happier" (first, second, and third, consistently) than their American counterparts (twelfth and sometimes lower), despite their comparative lower GDP (Bryner 2010). Researchers have argued that economic standing is a poor proxy for either individual or national happiness, giving rise to the paradox of the happy peasant and the miserable millionaire (Graham 2009). What students glean from cross-cultural studies of happiness is that what seems to matter the most to human happiness is *tangible* and perceived social welfare in forms such as basic material wellbeing (i.e., safe/secure housing, food, potable water), good health and health care services, social bonds/connectedness, and meaningful work. At the macro level, political stability, democratic rule, and social and environmental justice also play major roles in human contentment. For example, Costa Rica (which ranked number-one in happiness levels in 2010) demilitarized in the 1970s, which allowed for major reallocation of tax dollars to fund education, health care, jobs creation, environmental conservation, and sustainability that reduced gender pay/opportunity inequities, restored trust in elected officials and strengthened the national economy (Kristof 2010).

Conclusions

So, what to make of all of this? For me, the project of both teaching happiness and learning about MCLA student wellbeing generated much food for thought, including:

The students' desire to "cheat" on their happiness tests suggests something interesting about how deeply the ideas of the Declaration of Independence have penetrated into the sense of ourselves as Americans. Apparently, we've all internalized the belief that we not only have the right to pursue happiness, but an obligation to be happy. Unhappiness seems downright un-American.

College professors work with an inherently unhappy population, mainly due to age, but also to student career/professional immaturity. If we understand that much student discontent is beyond our pedagogical control, some of our own job-related stress could be reduced.

Research shows a strong correlation between stress, depression, and unhappiness. Stress can trigger depression, and depression produces stubborn discontent in ways that physical injury does not. Many people appear to adapt to physical injury in ways that people with depression cannot (Brickman & Coates 1978; Kolbert 2010). Knowing this, I had my students take the "College Student's Stressful Event" inventory, which measures stress along a mild to severe continuum. They averaged 272 points, indicating moderate stress. More importantly, no student fell into the mildly stressed category (<150 points), although several fell into the category of severely stressed (>300 points). This finding suggests that professors deal not only with an inherently unhappy population, but also a pretty anxious one, as well.

Given that suicide is the leading cause of student deaths across the nation, it is imperative that colleges and universities, including MCLA, make mental health awareness and treatment a priority (Turner 2011; DeMeglio 2012), not only for the wellbeing of their students, but also for the wellbeing of the professors who teach them.

Finally, more thorough comparative research is needed on happi-

ness, depression, and suicide rates across colleges and universities. Such research would allow MCLA to understand more fully how the school's institutional environment affects its students and would allow it to fine tune mental health services available to them.

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Reflections on the Craft of Teaching

BY GLENN A. CROSBY

am a professor of chemistry and materials science. At a recent dinner with friends, the conversation drifted to the topic of teaching, and I related an experience I'd had at my university. I had been asked to deliver a lecture on the subject of instruction styles and "tricks of the trade" to a general audience of teaching fellows, teaching assistants and assistant professors.

What could I, a scientist, tell my audience about the craft of teaching? The university lecture program was created by people in the humanities and the social sciences; there was not a science or engineering scholar in attendance. The room was mostly filled with women; the single male was a history professor. Having spent my professional life lecturing on principles of chemistry, physics, and mathematics, I gradually became aware that the lecture was going to be a challenge.

I started by talking about myself, a safe topic. I have a sugar problem and I'm at my best in the early morning. I make up my lectures and exams in the morning, I write my research proposals and my manuscripts in the morning, and I always try to schedule my classes for the morning. If the latter cannot be

arranged, then I must be careful to eat something shortly before the lecture or I simply don't perform well. I know it and the students know it. After class, as I collect my notes, one of them might say to me, "Don't you feel well today?" This is, of course, a gentle hint that I gave a lousy lecture. So, I always plan my days around my own natural rhythm. As I toil away in my office in the early mornings, I dread the sensation of the pressure changing in the building; it means the students and faculty are beginning to arrive and my creative time has ended. My research students will enter the office complex, the lab pumps will start to run, the phone will begin to ring, and people will pound on my door. With a short glance at my notes, I'm off to the lecture hall. If I've eaten a good, large breakfast, and if I've prepared in advance, then all will go well and I will make it through the morning in top form.

I have a second personal matter to consider—preparing in advance. For some inexplicable reason, I cannot prepare a lecture right before delivering it. If for unavoidable circumstances this happens, the lecture doesn't go well—nothing flows, my thoughts collide, and I mix the end with the beginning. Even an outline won't really help me; I still become flustered. I noticed the problem years ago, and solved it by the simple act of preparing my lectures days ahead of time. Immediately before the lecture, I need only look at my notes, perhaps write down a detail or two, and ruminate for a few moments on the topics to be included. Ten minutes often will suffice and the lecture will go smoothly. Evidently, in the period between crafting my notes and giving the lecture, my mind processes the material and arranges it in a rational sequence. Even talking about topics that are very familiar to me will not go well unless I've prepared the lecture at least a few days in advance. I know my own mind and I cannot interfere with the way it works.

What other elements should be considered when planning a lecture? Humor can add leavening and some professors even tell jokes, but I never do. If a humorous event occurs naturally, then I take advantage of the occasion to lighten the lesson, but just telling a joke as an aside is not my style. I routinely performed demonstrations in my classes and the students really enjoyed them, but there was always a central principle being illustrated. There is a fine line that separates conveying serious content and merely entertaining students. When I came close to that line, I recognized the danger and retreated. Periodically I did put on demonstrations only for show: The Color of Chemistry. It was entertainment, and it was advertised as entertainment.

As we all know, in any group of students there are all types of learners. For some, the concept of a partial molar volume, and the fact that volumes not always prove additive, is neatly buried in a mathematical symbol.

They get it. They can work with the idea and are comfortable with it. Others must be shown. When I mix 50 milliliters of alcohol with 50 milliliters of water and the final volume is only 95 milliliters, they get it—it is experimental fact. Still, others cannot comprehend it on a molecular level—neither the mathematics nor the visible experiment sinks in. Molecules are too abstract for them. They need something more concrete. I construct a thought experiment in which a gallon of golf balls is poured into a two-gallon container. A gallon of BB shot is added and the mixture is thoroughly shaken. Finally, they get it. They can visualize that the volume of the mixture is NOT two gallons because the BBs occupy the interstices between the golf balls. Once a student can imagine it, the realization that alcohol molecules are not the same size as water molecules becomes clear, and it is not such a great leap to the mathematical symbol and its meaning. A skilled lecturer ripples up and down the ladder from the concrete to the abstract and back again, until most of the class understands the idea and is ready to grasp why the partial molar quantity is defined in the first place, its importance in some areas of science, and how to use the concept with confidence.

There is another learning factor to consider, especially for those of us in technical fields. Many students are speaking English as a second language. Although I made no effort to modify my lecturing style to accommodate them, for exams I tried to be fair. I arranged the schedule so students could come early (7:30 a.m. for an 8:10 to 9 a.m. exam) so that anyone who wanted more time could have it. Most of the American students came at 8 o'clock, but the foreign students came early. They needed the extra half hour. I understand their need because I am considered to be fluent in German, but I still read that language and comprehend it only about two-thirds the speed of written English. Scheduling the exams to allow slow readers (and anyone else) to be comfortable is, in my opinion, a matter of fairness.

Another systemic problem that has grown over the years—until some classes are literally suffocated by it—is the gradual increase in size and complexity of textbooks. Especially in the sciences the texts' ancillary materials (slides, overheads, outlines, exam questions, problem sets, etc.) can overwhelm the student and, sadly, the instructor. If the teacher uses all the additional information, control of the course switches from the lecturer to the textbook authors. In addition, even though the authors placed in the text what they thought were the principal ideas of the field, often they didn't prepare the augmenting supplements. Yet, the student is forced to focus on what is in those pages. Moreover, a text, even a celebrated, successful one, may not emphasize what the instructor wants the students to carry away from the

course. I found that what I wanted my students to learn often was not reflected in the problem sets provided in the text; I usually found the problems to be uninteresting or trivial or irrelevant to my intentions for the course.

In the sciences, working problems is an effective way to internalize a subject or a concept; thus, problem assignments become significant. I learned early in my career to ignore all ancillary textbook materials; I asked students to study designated sections, and I wrote my own problem sets. Creating my problem sets produced an epiphany—I found that crafting problems required me to cogitate on ideas in a manner different from the way I thought about lecturing on the very same ideas. A problem could be designed to have many parts, each part extending the main idea in new directions, which gave me new ways to explain concepts—ways I had never thought of before. My specially crafted problems focused the students on what I wanted them to learn, and fewer problem were necessary to make my point. As I created the problems sets, I also designed my exams, and thus the test questions were relevant to my learning goals for the student. I was in charge of the course and what I wanted my students to learn, the tests were relevant to the concepts elaborated in the lectures, and student learning did improve!

I have the reputation of being a good lecturer; in fact, students have tossed a few accolades my way. During an interview I once was asked what my rules for teaching a good course were. I have three: (1) Know what you're talking about. This may sound trivial, but it's not. Some concepts in the sciences are difficult, really deep, and even a seasoned scientist must spend hours and hours chewing on such fundamental topics to be able to lead the class to the depth of understanding required if students are to become comfortable with the ideas. (2) The students must perceive that you are working as hard, or harder than they are. If you're not putting in the effort, they'll soon discover your fakery and will lose respect for you. (3) You can be as demanding as you wish, but you must be fair. This includes relating the tests to the subject being taught, assigning problems that are relevant and meaningful, and crafting tests so that hardworking students can earn respectable scores on exams.

Finally, I come to the most important responsibility of the instructor—to highlight the main points of a lecture and drive home the BIG ideas. Some ideas simply are not as important as others—the relative atomic mass of naturally occurring iron is a construct of nature, useful in chemical and engineering computations; the First Law of Thermodynamics states that energy is neither created nor destroyed, but merely changes its form (in normal, low-energy terrestrial reactions). The former holds only minor importance; the latter is a BIG idea with enormous implications. Some lecturers never dwell

on the distinction. At the end of some of my lectures I would say, "If you didn't understand this and this, you can still pass the course, but if you don't get THIS, then you're in trouble!" Some concepts are far more important than others, and it is necessary that the lecturer understand the distinction and make clear the concepts' relative importance.

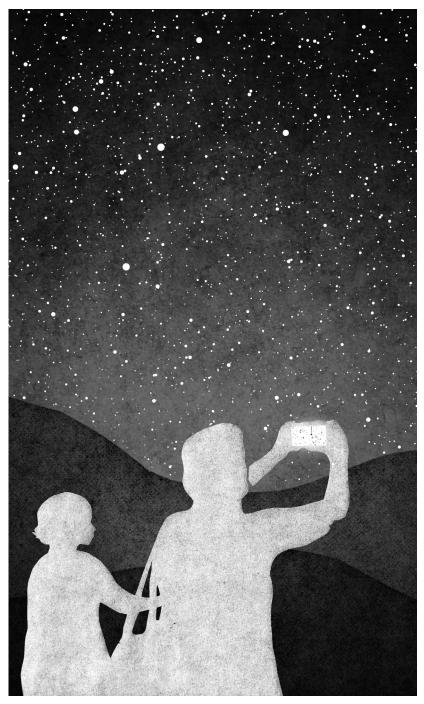


Illustration by Aaron Taylor-Waldman

How Do You Learn Science?

BY NICK STROUD

Walking along a local hiking trail, I wonder aloud to my son why the stream we are crossing is shaped like a big "C," instead of a straight line. We scan along the stream banks for clues and poke around in the water. As we continue on the trail, we spot a small card attached to a tree. The card has some brief instructions about how to use a mobile phone to learn about some science at this location. Intrigued, I pull out my phone, take a picture of the QR code on the card and I am immediately brought to a site explaining the science behind how an oxbow (our "C") is created in a stream. It's as if a shroud has been peeled away, revealing a new, and even more intriguing, view of the dynamic stream in front of us.

In the coming decades, the ways in which individuals interact with the world undoubtedly will continue to be changed by technology. This presents an incredible opportunity for learning outside of school, and especially for learning science. Two emerging trends are converging to allow new opportunities in science learning; ones in which instances like the vignette above will be woven into the fabric of our everyday lives.

The first is the widespread adoption of mobile devices and their use as not only a communication device, but also as a tool to create and share con-

tent. The type of activity supported by mobile devices continues to expand, encouraging an explosion in the number and quality of software applications ("apps") developed for these devices. The simplest mobile phone available in the current market not only has more processing power than the Apollo 11 computers, but also includes a camera and a Global Positioning System (GPS). Putting what essentially are miniaturized computers into our hands is not merely a technological marvel, but may also alter the way children interact with each other and with their surroundings.

As they open up new ways of interacting, mobile devices present unique opportunities for the development of learning experiences. One of these strengths is the ability of mobile devices to turn individuals into content creators. A simple example is the kind of social media content individuals can create through Facebook or Twitter. Creating content can empower individuals to explore their interests, and can shift their perspective from learner to teacher. In allowing such shifts to become more commonplace, mobile devices rapidly can change the dynamic between student and teacher. Allowing students to act as teachers can, and does, happen in classrooms, but such shifts are more frequent outside of school. In these instances, students are free to create, teach, and learn in a fluid fashion. In essence then, mobile devices, harnessed properly, can become effective tools for teaching and learning. Using the vignette as an example, a previous visitor to the oxbow in the stream may have used their mobile device to share their ideas on how that formation was created, harnessing the power of mobile devices as teaching tools.

The second trend is the increasing acknowledgement that a great deal of learning, especially in the case of science, occurs outside the confines of school classrooms. From museums and aquaria to "citizen science" projects and media reports, these learning experiences are gaining prominence as important examples of science learning. The kinds of learning experiences individuals encounter outside of school, whether they are of school age or not, can be especially salient for science learning because of their ability to spark interest, be tied to real-world scenarios, and focus on the process of science rather than a correct answer. In these settings, individuals may engage in practices that can be considered scientific (such as asking questions, making observations, and looking at evidence), as well as bring a wealth of knowledge acquired through daily living and functioning within a community. If we first can recognize these practices and "funds of knowledge" (as the researchers Luis Moll and colleagues in the early 1990s termed the stores of knowledge individuals and communities acquire over time in order to function), then we can leverage them to deepen and expand the definition of science learning into a more rich and varied tapestry of knowledge and practices than can possibly be woven within schools. This is not to say that learning science in school is not worthwhile or without its place, but it is important to distinguish and recognize the unique and important facets of learning science outside of school.

Pulling together the two threads of mobile devices as teaching and learning devices, and the unique features of science learning outside of school, I envision a changing dynamic in the way individuals learn science. Allowing individuals to explore scientific questions of interest to them, and making that process interactive, can be accomplished through an on-demand, mobile science learning tool. I hope to see this type of tool become a regular part of how individuals explore science, and I believe it will lead people to question the science behind their everyday experiences. For me, this goal is worth working toward and working on, and I believe we all will be better off if we can come close to attaining it.

Further reading:

- The New Media Consortium's (NMC) *Horizon Report* annually details research-based educational technologies at various adoption "horizons," including "one year or less," "two to three years," and "four to five years." The latest one for K-12 education can be found here: www.nmc.org/horizon-project/horizon-reports/horizon-report-k-12-edition.
- "Funds of Knowledge" research on the kinds of knowledge individuals bring to bear on new learning situations: Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of Knowledge for Teaching: Using a Qualitative Approach to Connect Homes and Classrooms. *Theory into Practice*, 31(2), 132-141.
- Commentary on the idea that "School is not where most Americans learn most of their science," Falk, J. H., & Dierking, L. D. (2010). The 95 Percent Solution. *American Scientist*, 98, 486-493.
- A recent op-ed piece on the role of museums in developing critical thinking: Bartels, D. M. (2013). Critical Thinking Is Best Taught Outside the Classroom. *Scientific American*.

Teaching and Learning With Henry Giroux

BY SETH KERSHNER

s a counterpoint to the current hand-wringing over public education in the United States, it may be helpful to remember that we will spend a comparatively small amount of time during our lives as students in the classroom. That the focus thus far has been on teachers and tests should not surprise us, however. These are tangible and measurable aspects of education. It happens to be much harder to reform—or even to keep track of—the educational force of culture. What does that force look like? As C. Wright Mills put it in his famous BBC address, "The Cultural Apparatus," we base our understanding of the world around us not only on schools, but also on "the observation posts, the interpretation centers" and "presentation depots" of the mass media and entertainment industry (Mills 406). "Taken as a whole," Mills continued, "the cultural apparatus is the lens of mankind through which men see; the medium by which they interpret and report what they see" (Mills 406). The media's overpowering influence in our lives and the fact that we never actually confront pristine reality (only a mediated version thereof), raises the question: Could the cultural apparatus be the most influential teacher we ever have?

Mills, of course, was speaking more than a half-century ago. In search of a more contemporary take on the matter, I spoke with Henry Giroux, a former professor at Penn State and currently the Global Television Network Chair of English and Cultural Studies at McMaster University in Ontario, Canada. Professor Giroux is author or co-author of more than 50 books, including *The University in Chains: Confronting the Military-Industrial-Academic Complex* (Paradigm, 2007) and his newest work, *Youth in Revolt: Reclaiming a Democratic Future* (Paradigm, 2013). Professor Giroux calls the educational influence of mass culture "public pedagogy" and has, over the years, used the examples of Disney films and popular television shows like *Mad Men* to expose and critique the embedded pedagogy of popular culture. As he remarked in our interview, "The most powerful educational force in the U.S. is not the schools, it's outside the schools."

I talked with him last February about public pedagogy, the promotion of pro-military values in schools, and organized efforts by students themselves to resist these trends.

SK: I just got back from San Diego, where my colleague and I spoke with young people who had been student activists in their high school. These kids and their peers had become radicalized after their principal cut back on their college-prep curriculum to make way for a JROTC unit. These students—many of whom were Latino and from economically disadvantaged backgrounds—could no longer take AP Spanish, but they could learn marksmanship on the campus's JROTC firing range.

HG: This is an important issue and symptomatic of a much larger problem. Public schools are not simply being corporatized, they are also subjected increasingly to a militarizing logic that disciplines the bodies of young people, especially low income and poor minorities, and shapes their desires and identities in the service of military values and social relations. For a lot of these young people, there are only a few choices here: you can be unemployed and hopefully be able to participate in some way in the social safety net, you can take a low-income job, you can end up in prison or you can go into the

^{1.} The Junior Reserve Officers' Training Corps program (JROTC) is now present in more than 3,000 high schools across the country, enrolling more than 400,000 14- to 18-year-old "cadets." Students enrolled in JROTC—which the Pentagon describes as a citizenship training program, not a recruiting operation—receive classroom instruction in citizenship, history and "military science" from retired military personnel; practice military drill formation; and attend school in uniform once a week. Some JROTC units even have firing ranges on campus so that cadets can train to be ... well ... good citizens. For more on student-led resistance to JROTC, see Harding & Kershner and Lagotte.

military. And it seems to me that increasingly the military is becoming the best option of all of those. So you have a whole generation which—by virtue of this massive inequality—really has very limited choices. But also you have these institutions that are basically there to socialize kids, telling them the only way to succeed is to join the military-industrial complex, and that there really are no other options, at least for them. Moreover, as these young people are subject to the warring logics of a militarized society, a society in which life itself is increasingly absorbed into a war machine, it becomes difficult for them to imagine a social order that can be otherwise, one that is organized around democratic values.

SK: Like this program I've been following: it's called STARBASE. This is a Defense Department program that every year reaches around 70,000 students in over 1,000 schools – the majority of them in fifth grade. Pitched as a way to supplement school curriculum in the STEM (science, technology, engineering, mathematics) fields, there's an insidious element of military marketing at work: soldiers "mentor" students enrolled in this program and most of the instruction takes place at military installations. As part of the program, students are given plenty of time to horse around on "cool" military hardware.

HG: It's mind-blowing. I think what we often forget—and this is something that you and others like yourself are trying to make clear—is that when you talk about the militarization of American society you're not just talking about increasing the military budget or arming the police with military-style weapons and so forth. You're also talking about the militarization of a culture in which military values and relationships permeate every aspect of what C. Wright Mills called the cultural apparatus—schools, fashion, movies and screen culture. Violence becomes the only shared relationship that we have to each other, the only mediating form through which people can now solve problems. More insidiously, it defines our sense of identity and personal liberation through violence both as a mediating force and as a source of pleasure and entertainment. It's one of the reasons why the majority of people in the U.S. support state-sanctioned torture. How do you explain that? It's really a culture that's become so saturated in this military/violent mindset that it has lost any sense of critical thought and ethical responsibility and has little understanding of what a democratic society might look like.

SK: Militarism in the schools is of course just one aspect of a larger culture of militarism in the U.S. And this gets at your notion of public pedagogy, doesn't it?

HG: I may be terribly wrong, but I think the central issue here is that, first of all, you have to realize that the educational force of the culture represents the most important pedagogical force at work in the United States, Canada, and in many other countries. This is not to suggest that schools are not involved in the process of teaching and learning. But I think we commit a grave mistake when we assume that schools are the only place where learning goes on. I would be willing to argue—and I have argued—that the most powerful educational force in the U.S. is not the schools, it's outside the schools. Young people are awash in a public pedagogy that is distributed across numerous sites that extend from movies and the Internet, readily amplified through a range of digital apparatuses that include cell phones, computers, and other electronic registers of the new and expanded cultural flows. When schools fail to make a connection between knowledge and everyday life—between knowledge and these ever-expanding cultural apparatuses – they fail to understand, interrogate, and question the educational forces that are having an enormous influence on children. The ongoing commercial carpet-bombing of kids through a range of ever-expanding technologies—that make possible new social networks and information flows—is aggressively commodifying every aspect of their lives. Not to address this and make it pedagogically problematic, not to interrogate the massive violence kids are exposed to through screen culture and the new digital technologies, is to do an enormous disservice to the way in which young people are being educated by the wider culture.

SK: But young people are resisting, in various ways. You obviously were inspired to write your latest book because you believe youth have a role to play in fighting and changing the system.

HG: As someone from the generation of the '60s, I'm enormously inspired by what they're doing. Right now they may be the only chance that we have. Consider their courage: the bravery of these young kids in Occupy Wall Street, fighting against state-sanctioned violence in the form of police pepper spray, police dragging them off to jail and arresting them en masse. They've become a model for what it is to stand up to this one percent that has turned the U.S. into an authoritarian society. I think that what these kids are doing is not only producing a new language to talk about inequality and power relations in the U.S., but they're actually trying to create public spaces where new forms of social relationships, inspired by democratic and cooperative values, are really becoming meaningful. These young people are rethinking the very nature of politics, and asking serious questions about what

democracy is, and why it no longer exists in many capitalist countries across the globe. They have been written out of the discourses of justice, equality, and democracy, and are not only resisting how neoliberalism has made them expendable, but they are also arguing for a collective future very different from the one that is on display in the current political and economic systems in which they feel trapped. That's important.

But they face enormous challenges. They don't have access to the dominant media. They're trying to use new media to create new modes of communication. They're trying to understand what democratic processes might mean in terms of sustaining collective struggles, and all of this takes time. I think that rather than saying that Occupy Wall Street has died, we can say that they're in the process of understanding what the long march through alternative institutions might mean.

As conditions get worse in the U.S., this movement will grow and take on an international significance. Hopefully they'll join with young people in other countries to figure out how to address the biggest problem that the global community faces—politics is local and power is global. Nation-states can't control the flow of capital; it's outside the boundaries of nation-states. So, we need a politics that's global to be able to deal with that.

SK: In reflecting on my own research, I've seen examples of school administrators treating student activists in two distinctly different ways. In my area, Western Massachusetts, for example, there are high school students who are very heavily involved in organizing around issues of ecology and sustainability. They lobby for locally grown foods to be served in the cafeteria, install small garden plots for community members, school officials give them land on school property to grow vegetables, and so on. But then you have the students in San Diego that I mentioned before. Because they were fighting against the military presence in their schools they were seen as agitators. School administrators and police would conduct video surveillance of the students' marches, and one of their leaders was prevented from taking part in the graduation ceremony with the rest of his class. What might explain the differential response here?

HG: As long as these modes of resistance don't challenge relations of power, that's fine with school officials and others in a position of authority. As long as they're focused on students finding a happy spot in themselves, positive thinking, that's fine. But as soon as they start talking about power, militarization, inequality, racism—all those things that point to deep structural problems—student resistance and dissent is viewed as exceeding its possi-

bilities and limits. Just look at what happened in places like Arizona, where these racist educators and politicians succeeded in banning ethnic studies. When young people protested against their history, culture, and forms of witnessing being excluded from the curriculum, they were labeled as criminals, communists, and agitators.

What is most important in terms of these youth movements is that you have a lot of young people making connections, saying, "Look, you can't talk about the rise in tuition unless you talk about the attack on the social state and social protections. You can't talk about what's happening in education unless you talk about the rise of the punishing state." In a place like California where more is spent on prisons than on education, clearly those connections are what give force to a generation of students who are simply refusing to isolate these issues. It no longer makes sense to say that these are spoiled kids who don't want to spend much for their education. These young people are developing a conversation about society at large, calling into question its most fundamentally oppressive economic, political, and educational structures.

Also, young people are recognizing that they're not going to find their voice in the Democratic Party or in the existing labor unions. What they really need to fight for are new mass and collective organizations that can call the entirety of society into question and mobilize so as to develop the policies and institutions that make a new and radically democratic society possible.

SK: Here's a paradox for you: How do you teach social change or resistance to authority within public schools—institutions that many have criticized for being authoritarian and resistant to change?

HG: You can't do it if you believe these institutions are so authoritarian that there's simply no room for resistance. That's a mistake. Power is never so overwhelming that there's no room for resistance. Power and the forms it takes are always contradictory in different ways, and there is always some room for resistance. What needs to be understood is the intensity of dominant power in different contexts and how it can be named, understood, and fought. The issue here is to seize upon the contradictions at work in these institutions and to develop them in ways that make a difference. During the '60s, the term for this was the long march through institutions, and the reference had little to do with reform but with massive restructuring of the instruments of democracy.

And we also need to impose a certain kind of responsibility upon adults in the schools—whether they be social workers, university professors, or

high school teachers. Clearly it's not enough to say they operate under terrible burdens that make them voiceless. I understand those structural conditions, but it doesn't mean they shouldn't resist either. That means they not only have to promote particular kinds of pedagogies in their classrooms, but they also have to join social movements that give them the force of a collective voice that can bear down on these problems and create change.

The greatest battle that we're facing in the U.S. today is around the question of consciousness. If people don't have an understanding of the nature of the problems they face, they're going to succumb to the right-wing educational populist machine. This is a challenge that the Left has never taken seriously because it really doesn't understand that at the center of politics is the question of pedagogy. Pedagogy is not marginal, it is not something that can be reduced to a method, limited to what happens in high schools, or to what college professors say in their classes. Pedagogy is fundamental not only to the struggle over culture, but also, if not more importantly, the struggle over meaning and identity. It's a struggle for consciousness, a struggle over the gist of agency, if not the future itself—a struggle to convince people that society is more than what it is, that the future doesn't simply have to mimic the present.

SK: What would this look like in practice? One encouraging experiment I had the privilege of observing up close is taking place at the Emiliano Zapata Street Academy in Oakland. There, in an "alternative high school" within the Oakland Unified School District, student interns working with a group called BAY-Peace lead youth in interactive workshops on topics relevant to their lives: street violence, the school-to-prison pipeline, military recruiters in their schools, and so on.

HG: I think two things have to go on here, and you just mentioned one of them. We've got to talk about alternative institutions. There has to be some way to build institutions that provide a different model of education. On the Left, we had this in the '20s and '30s: socialists had Sunday schools, they had camps; they found alternative ways to educate a generation of young people to give them a different understanding of history, of struggle. We need to reclaim that legacy, update it for the 21st century, and join the fight over the creation of new modes of thinking, acting, and engaging ourselves and our relations to others.

On the second level is what Rudi Dutschke called, and what I referred to earlier, as the "long march through the institutions." It's a model that makes a tactical claim to having one foot in and one foot out. You can't turn these

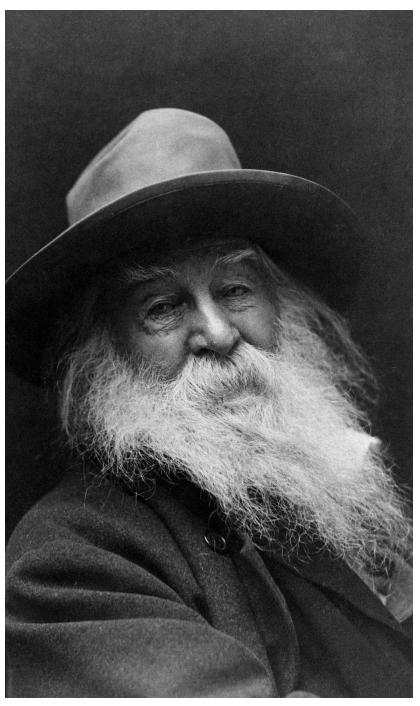
established institutions over to the Right. You can't simply dismiss them by saying they're nothing more than hegemonic institutions that oppress people. That's a retreat from politics. You have to fight within these institutions. Not only that, you have to create new public spheres.

SK: Henry, we've covered a lot of territory. Is there anything we haven't addressed that you would like to bring up before closing?

HG: We need both a language of critique and a language of hope. Critique is essential to what we do, but it can never become so overwhelming that all we become are critics and nothing else. It is counterproductive for the left to engage in declarations of powerlessness, without creating as Jacques Rancière argues "new objects, forms, and spaces that thwart official expectations." What we need to do is theorize, understand, and fight for a society that is very different from the one in which we now live. That means taking seriously the question of pedagogy as central to any notion of viable progressive politics; it means working collectively with others to build social movements that address a broader language of our society—questions of inequality and power (basically the two most important issues we can talk about now.) And I think that we need to find ways to support young people because the most damage that's going to be done is going to be heaped upon the next generations. So what we're really fighting for is not just democracy; we're fighting for the future. And so critique is not enough; we need a language of critique and we need a language of possibility to be able to go forward with this.

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Poet Walt Whitman (1819-1892)

Gold and the Nightwatchman's Daughter

BY BEN JACQUES

The are in a classroom at a Massachusetts state college, and we are reading Walt Whitman. We began with "When I Heard the Learned Astronomer," in which the poet abandons the lecture hall for the open field to gaze directly at the stars. Then, for one week, we read "Song of Myself," Whitman's frank celebration of being alive. Its 52 free-form stanzas form the heart of the 1855 edition of *Leaves of Grass*.

Now seated around a long table, my students are taking turns reading aloud Whitman's "Song for Occupations." In this six-part ode, the poet celebrates farmers, glassblowers, milkers, millers, iron workers, sail makers, cooks, bakers, carpenters, masons, seamstresses and surgeons.

The poem is vibrant in detail, cataloging both labors and tools:

The pump, the piledriver, the great derrick.. the coalkiln and brick-kiln, / Ironworks or whiteleadworks.. the sugarhouse.. steam-saws.. The cylinder press.. the handpress.. the frisket and tympan.. the compositor's stick and rule.

But why should we care? I ask my students during a pause in the reading—themselves sons and daughters of mechanics, retailers, nurses, accountants, teachers, office workers, technicians, truck drivers, and social workers.

The room is quiet, but not because my students don't know the answer. "Because it all matters," a young woman finally responds. "Our lives and what we do matter."

She has, of course, identified the central and centering theme of Whitman's poems: the immeasurable value of human beings, regardless of class, gender, race, religion, or occupation. Aware of society's prejudices, Whitman will return to this theme again and again.

Is it you then that thought yourself less? Whitman asks in the first stanza of the poem.* Is it you that thought the President greater than you? Or the rich better off than you? Or the educated wiser than you?

If so, Whitman has something to teach us: I bring what you much need, yet always have, / Bring not money or amours or dress or eating but I bring as good.

What he brings is not a matter of analysis or textbooks: *It eludes discussion and print, / It is not to be put in a book . . . it is not in this book.*

In the cadences of a preacher he continues:

You may read in many languages and read nothing about it; / You may read the President's message and read nothing about it there: / Nothing in the reports from the state department or treasury department or in the daily papers or the weekly papers, / Or in the census returns or assessor's returns or prices current or any accounts of stock.

As a student reads, I can almost hear Whitman whispering: The sum of all known value and respect I add up in you whoever you are; / The President is up there in the White House for you it is not you who are here for him.

What Whitman offers in this poem is the gift of ourselves and those around us, an acceptance enriched by his democratic vista. In line after line he reminds us that we are, ourselves, the goal of science, art, laws, politics, commerce—and, yes, education.

It's a good lesson for students in public colleges and universities, because it affirms them in a society prone to elitism. And it's a tender reminder that happiness is not tied to wealth, but to other human beings.

Whitman closes "A Song for Occupations" with an elegant affirmation. Praising the singer over the psalm, the preacher over the sermon, the carpenter over the pulpit he carved, he exclaims:

When a university course convinces like a slumbering woman and child convince, / When the minted gold in the vault smiles like the nightwatchman's daughter . . . I intend to reach them my hand and make as much of them as I do of men and women.

But now our hour in the classroom is up, and hands are closing the thick Penguin edition of *Leaves of Grass*, gathering papers and backpacks. As my students depart, I notice the far-away look in the eyes of one, and glimpse in another's mischievous expression the smile of the nightwatchman's daughter.

This essay first appeared in MTA Today, Oct/Nov edition, 2005.

Advice to Students *or*You Deserve the Fairy Wings

BY MELISSA QUIRK CAIRNS

The following poem was written by an area slam poet and local high school English teacher as advice for students who have stopped believing in themselves. Bits and pieces of experiences with specific students have found their way into this spoken word poem:

When you stand there With your voice shoved with your fists deep into your back pockets when you stand there denying your pain (and your potential)

You plant your feet
And your heart
In the dank earth
Without hope of anything
Growing there
But with the simple desire
To hide it
In the dark

Bury it under your Fears and Anger and Self doubt It is then
That I want to
Grab you
To pick you up
And shake you
To wake up that snow globe of dreams
And set you down gently
So that you can see

Because when your feet are on the ground
And your dreams are in the air
And all around
Like firefly fairies sparkling past in their shooting star patterns
When you shift your vision to allow yourself to see this new dimension
When you change the "reality" from what IS
To what CAN BE

Then You can fly

You can strap those dreams like fairy wings Around your shoulders And find release from the stagnation you're anchored to Play You can, you know

And, no, it's not just some Anthony Robbins Life coaching seminar The "if you believe it you can achieve it" But Well, okay, maybe it is a little

Because here's the thing I know is true:
I see the success already alive in you
It's hiding in the shadows of your self-doubt and fear
Buried under days of hiding your mom's liquor and
Cutting your arms so you don't feel the pain
Of missing your dad or feeling the shame
Of not being everything you think you're supposed to be

It's buried I get it.

But it's still there, darlin', It's still there Waiting for you to tap into it

I see it in the bottomless wells of your eyes Pools of possibility You don't know it yet, but the choice *is* yours

YOU have a say in how your life goes Believe me, if just for today: You have a SAY in how your life goes

And I *know* that the road is long And I *know* that it's not always easy

And I know that the "right" thing to do isn't always the choice you want to make

And I know that some days the call of the razor to forearm is louder than your own voice

And that voice in your head sometimes that voice whispers dark thoughts Pouring them like Claudius' poison into your ear

And I know that sometimes the best you can do is trade the razor in for a Sharpie and mark yourself with lines

Of poetry Of sadness Of defeat

But You Have it in you

It's already there

So put on those fairy wings To fly long enough To see beyond the immediate landscape
High enough
To feel the winds change direction
To see the clouds from above
To see your Self
Below
And cradle her with your view
Love her from above

And know You have it in you To make the change you see

Your power is greater Than your surroundings

Four Prose Poems

BY ANNIE RASKIN

None of the following four prose poems are specifically "about" teaching and learning, yet so much of each is given to us far from the classroom, and often when we least expect it. I am fascinated by the Buddhist concept of the harsh angel, the often unrecognized teacher in our lives, invisible while present, and often unrecognized, the teacher that prompts us to listen and look with alertness and intensity while plowing through hurt, grief, loneliness, confusion, illness, even outrage, the teacher that asks of us a new openness, a new understanding, perhaps an acceptance, perhaps even joy, however painful, complex, or simply puzzling the lesson may be.

Lessons

He holds her close as she puckers up and leans into his handsome face, his lean, tanned, muscled body. His lips are parted. His Army buddy leans in awkwardly from the right hand corner of the black and white snapshot, far too eagerly watching the kissing lesson on the summer-lit beach. She is one year old.

Years later the father taught her to fish. *All good fishermen clean their own catch*: Slit the belly from anal vent to gills. Gut them. Cut off their heads. Strip off the gills. Rinse the body cavity. Skin perch. Scale pickerel. Skin bullheads. Scale bass or skin it. Leave the hallowed brook trout hollowed

and whole. Scales flew high and stuck to the walls; the cat crunched in bliss on the fish heads tossed her way; livers, hearts, stomachs and guts, pillows of roe, sawed-off fins and flayed skin carelessly dispatched in a heap on the day-old newspapers laid out next to the sink. She snatched up smooth chalk white lobes for closer study. *Milt*, the father told her. *That's how you know it's a male.* Roe is the eggs, the mother's eggs—each tiny globule, each fish-to-be distinct if she looked close enough. This other nearly formless mass is what the father makes: slippery, chalk white, solidly fluid. *He sprays it on the eggs floating in the water.* Just firm enough to hold in her hand, a sac thinner than skin but tough as the membrane that makes a too-fresh hard-boiled egg so tricky to peel.

More years later the father again taught her to kiss. *That's not a kiss*, he told her. *Soften your lips*. She did as he ordered. Somewhere in those same years the mother taught her to make a pale pudding called junket. The mother poured it into fluted glass dishes lined up on the kitchen windowsill to set. Sweet and smooth as a kiss, milk-white as death, she did love its feel in her mouth. It barely trembled in the dish if she touched it gently with a finger. Surface tension held it so. When she put her spoon into the junket, it began slowly to ooze water around the spoon's hole, intact only if untouched. *Rennet*, the father explained, *from the lining of a dead calf's stomach*. No real danger here, only offal in its own way.

Birthing the Rocks

Maples shade this back yard. Five looming maples. Last fall men climbed and clung in a balletic tour de force to lop away the bottommost limbs. Still, shade is everywhere; sun only dapples at high noon. Holes I try to dig for planting shade-loving Hosta reveal roots thick as my wrist. My shovel bent on moving maple roots thuds dully. There is no shifting them from their fiercely insistent grip on this turf I wish simply to share. Only the small, tinny plink when the point of my shovel finds unyielding shape tells me a stone sleeps deeply, tells me that here, in this place, I can plant. Here, in this place, a rock older than time I can fathom rests in soundless sentience. I do not awaken these rocks too quickly. They ought not to be harshly hustled from their underworldly

quiet. My shovel blindly feels its way, seeking that slim margin between rock and soil gracious enough to cede a rim of space, the rock not yet ready to shudder or shift, but only to suggest the curving compliance of a child side-sleeping, perhaps preparing to slowly stir from the depth and the dark and the dreaming. Sliding the tip along the stone's belly I circle and lean, letting the rock have its silent way with me when just like that a channel opens with a lurch as if tenacity were broken, primal connection loosed. Disquieted, I kneel to stroke its bulk, sense its weight. What is it I have disturbed – what the origin, what the form. What the unknowable wisdom of its presence now, here in this one place. Precambrian roots at the core of the Green Mountains, 560 million years before this present day, before this ordinary steamy summer day in July, before this day, three summers into this garden becoming so gradually my garden. Who the witnesses. What the glacial force that wrestled and wore these rocks of granite, quartz, and gneiss to skin-smooth eggs of dinosaur dimension. What they mean to me.

Dysgeographica

She traces the impenetrable code of lines and loops to nowhere; north, south, east, west hold no meaning. She touches route numbers with her index finger; they multiply and mingle and confuse each other. Static blue-colored bodies of water briefly reassure, but there are too many. Even if she could find this lake on her map, this lake where she reluctantly takes swimming lessons when she already knows how to swim, where each day during free period she rows a boat all by herself far enough out in this bogus lake to make this summer camp look tiny and alien, it would not help her find her lake. Toasted pine needles in the patchy sun on the floor of paths from her cabin to the lake or the dining hall mime the warm spicy smell of pine needle littered paths at home. Each day after lunch she stalks the yellow route lines during rest hour on her top bunk. She listens to the counterfeit crows caterwauling. Whenever she can, she sits at the shore to look over this lake to the baffling mountains beyond it. There are no mountains anywhere near her lake. She isn't accustomed to mountains. They block her way home. They loom. They gaze back at her. They move closer every day. She is in the wrong place; it's the wrong map.

If she were to run her fingers over the mother's face, trace the territory between lips and lines and loops that carry the mother's disappointment all the way to her eyes, eyes like small lakes after hard rain pellets have muddied up the water, she would still have no way to know if she were home. The terrain of the father's being is a map she reads with all her senses, but to no avail. Wherever it is that his directions point, they each lead to the same fierce blazing hot sun that loves her and burns her all at once. She smells the heat surrounding him, feels the waves of his intemperate temper, but fails to find where the fit falls. The mother and the father: as cryptic and confusing as road upon road, route numbers, and never-ending lakes as they drive with their illegible faces over illegible mountains to leave her in this illegible place with only a promise to come back. A promise. Untranslatable maps. She is powerless to grasp the way, to conjure up the long path from here to there beyond the mountains' stare to the place of uncertain love where longing cannot rest.

What She Knows

Two or three nestle deep underneath a corner of the worn granite millwheel used as a step at the back end of the 18th century farmhouse. Salamanders. So still they seem dead. They are not. She knows. They won't move until she picks them up, until they rest in the curve of her palm. Even then they move as if waking up for the first time, as if they are only now being born, slowly gathering themselves into themselves, less an actual movement than a feeling in her hand of things on the inside turning on as if she has pushed a button that isn't there. Sleepy salamanders: helpless, dormant salamanders. Dark red salamanders with deeper red spots. Grey-blue salamanders with bright yellow spots. Dusky black ones with no spots. The red ones are newts. She knows this because she heard the farmer across the street telling his son there were red-spotted newts under the hen house. She turns them over, looks carefully at their under parts, their short legs, their sticky toes. She studies their quietness, their stillness; they may be spellbound in a fairy tale. Their eyes are slits that blink without opening. From where do they come? Are they scared or only awaiting a sign to awaken under the heavy millstone? Maybe

it's simple: they like it here under the smooth weight of the old stone, in the cool absence of light, in the damp-dark musty safety of it. She wants to know what their names are in the book that gives names to salamanders. She wants to know if they get bigger, or if they stay small, and where they go when it's winter. She asks no one; they are her secret. She knows that she needs to know.

Educators

(In honor of my mother)

BY AKILI CARTER

I go forward armed with the lessons of many educators
From professors to parents to ex-wives to current fiancées
Life lessons have been drilled into my school while I was wide awake
The answers to so many questions that have yet to be asked
The most amazing education is the one you get at the hospital
At 8 o'clock in the morning when your first child is being born
You learn about your gumption as a man and a woman
You figure out if you are ready to sculpt and mold a young human being
As a father and as a mother

The second-greatest lesson you get is when you watch your parent being laid into the ground

Yes, they have given you the foundation for greatness, but you still are never ready

For that type of loss and to handle that grief

When you are arguing with them about a lesson whether mini or profound You are not thinking that what they are saying is out of love What is an educator or a teacher, or education and learning without context? The proper box for you to put your stackables of life into is very important But I digress; I started this poem wanting to answer a question about education What is education? What is a teacher?

Well, your education is ongoing and non-stop, from cradle to grave
What is a teacher? My mom, dad, fiancée, children, and family
Hopefully, one day, when this topic is being written about by my children
They will say, my dad was a teacher

And I hope someone will reply that everyone is a teacher in their own way The thing I want to ask is, are the lessons worth learning?

ABOUT THE AUTHORS

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Akili Carter is a social worker from Long Island, New York. He has two children, Ayanna and Devon, and is an MCLA alum. A student-athlete who played basketball for the men's team, he majored in history and English. Akili is completing his fourth collection of poetry called *Shattered Mirrors*.

Glenn A. Crosby

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Dale Borman Fink

Dale Borman Fink, Ph.D., came to MCLA after 35 years in childcare, early childhood education, out-of-school time care, and research and training related to children with disabilities and their families. Among his books are *Making a Place for Kids with Disabilities* (2000), *Control the Climate, Not the Children: Discipline in School Age Care* (1995), and a children's book, *Mr. Silver and Mrs. Gold* (1980). He holds a Bachelor of Arts degree from Harvard University, a Master's degree in early childhood education from Antioch University, and a Ph.D. in special education from the University of Illinois at Urbana-Champaign. Fink is an assistant professor at MCLA, where he teaches courses in early childhood education, special education, and children's literature.

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Gideon Fink Shapiro is a doctoral candidate in architecture history and theory at the University of Pennsylvania School of Design. His dissertation research concerns the landscape architecture and engineering of public parks in 19th-century Paris. His writing has appeared in the *Journal of the Society of Architectural Historians, Architect, Abitare, Clog, Crit, Domus*, the *Guggen-*

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Tony Gengarelly

Tony Gengarelly, Ph.D., is a professor of art history and museum studies at MCLA, where he has taught for more than forty years. He has written and published on a variety of subjects, including Native American painting and Outsider Art. Most noteworthy are articles for the *Folk Art Messenger* and publications on American poster art, Maurice Prendergast, and American landscape painting. Gengarelly has curated, individually or with his students, over 30 exhibitions. Several have been featured at the Clark Art Institute, Williams College Museum of Art, and MCLA Gallery 51. For the past nine years he has been the director of the Jessica Park Project, an educational and professional program at MCLA.

Ben Jacques

A teacher, poet and free-lance writer, Ben Jacques has written for publications ranging from *The Christian Science Monitor* to *Americas* magazine. Several of his poems and essays have appeared in *The Mind's Eye*. One of his signature courses in his 23-year tenure at MCLA is "Whitman and the New World Poets"— a study of distinctively American voices, including William Carlos Williams, Carl Sandburg, Langston Hughes, Theodore Roethke, Allan Ginsberg, and Pablo Neruda.

Seth Kershner

Seth Kershner has taught Spanish at MCLA and Berkshire Community College (BCC). He is currently the Public Services/Reference Librarian at Northwestern Connecticut Community College. His articles and interviews have been published in *Sojourners*, *Fellowship*, and *Z Magazine*. With Scott Harding, he is co-author of "Just Say No: Organizing Against Militarism in Public Schools," which was published in 2011 in the *Journal of Sociology and Social Welfare*. He and Harding are among a handful of researchers examining the grassroots "counter-recruitment" movement in the U.S. and are currently writing a book on the topic..

Melissa Quirk Cairns

Melissa is a poet, actor, director, and teacher in Berkshire County. She has performed her poetry as a feature artist as a part of the 10X10 Poetry series and the Greenfield Word Festival, and recently had the pleasure of being invited to read and be interviewed for Cristin O'Keefe Aptowicz's Indiefeed Performance Poetry podcast "Live from the Amy Clampitt House." In addition, Melissa has competed in several poetry slams across Berkshire County including the WordxWord Poetry Slam and the Western Mass. Championships. She can frequently be found on the Tuesday Night Project stage at Y Bar as a poet, storyteller, or emcee. Melissa graduated from Mount Holyoke College, earned her Masters degree at Lesley University, and is an alumna corps member of Teach for America. She currently teaches English at Drury High School in North Adams, MA, where she lives with her husband and two cats, Atticus and Boo.

Annie Raskin

Annie Raskin teaches literature courses at MCLA, including those on the graphic novel, metafiction, and 19thcentury American women regionalist writers. She previously taught at the State University of New York at Albany, where she was awarded a Ph.D. in 2004. She published an essay, "Hawthorne and the Daguerreotype: Portraits Gleaned from the Sun," in *The Mind's Eye* of spring 2005. She has published a number of op-ed essays in *The Berkshire Eagle*, as well as poetry in *The Berkshire Review* and in *The Prose Poem Project*. The four prose poems in this volume of *The Mind's Eye* are part of a manuscript in progress with a working title of *Eros & Place*.

Gregory Scheckler

In addition to being a fine art painter and photographer, Gregory Scheckler worked as a toy wrangler, floor refinisher, plasma donor, camp counselor, latrine cleaner, onion cutter, antique restorer, typesetter, book store clerk and later, an art professor. He resides in Williamstown, MA, where he often can be found hiking, skiing, and biking the fair slopes of the Berkshires.

Nick Stroud

Nick Stroud is an assistant professor of science and technology education at MCLA, where he teaches courses in education and physics. His academic interests include creating links between learning science in and out of school, as

well as developing the science knowledge and practices of future teachers. He also enjoys spending time outdoors throughout the year with his family. He holds a Ph.D. from Columbia University Teachers College.

Jennifer Zoltanski

Jennifer Zoltanski holds a Ph.D. in sociology from Brandeis University, a Master of Science degree in sociology from Portland State University, and a Bachelor of Arts degree in French from the University of Denver. Her research focuses on prosecution of war crimes and genocide by the Yugoslav and Rwandan Tribunals alongside transnational mobilization against war-related gender violence. As an assistant professor of sociology at MCLA, Jennifer teaches classes on criminology, genocide, law and society, social problems, social stratification, and social movements. She received the MCLA Faculty Curriculum Development Award (2012) for "The Sociology of Happiness." She serves on *The Mind's Eye* editorial board. In her spare time, Jennifer enjoys hiking with her dog Amber and playing the ukulele.

Forthcoming Issues

The editors are working on a number of themes for publication. See the themes below for more information about each issue.

If you wish to discuss or submit an article, piece of fiction, poetry, or work of art in a specific issue, or have suggestions for themes of future issues, please contact us as soon as possible at f.jones-sneed@mcla.edu.

The Mind's Eye also will continue to publish "general articles" on liberal arts-related topics that do not fall under the themes.

Main theme	Submission deadline	Publication date
Commemorative Issue	January 7, 2014	September 2014
Civil Rights	April 15, 2014	To be confirmed
Art and Culture	January 7, 2015	September 2015
Environmental Issues	April 15, 2015	To be confirmed

Writer's Guidelines

Submissions should adhere to these guidelines:

- 1. Submit unpublished manuscripts both on paper and on CD, using either PC or MAC platform word-processing programs. Manuscripts should be typed double spaced and printed on one side of the paper only. List your name, address, phone number and email address, if available, on the cover sheet, with your name at the top of each page.
- 2. We will consider simultaneous submissions under the provision that the author notify us of this and contact us immediately if the material is accepted elsewhere.
- 3. If you wish your manuscript and disk returned, please enclose a return self-addressed envelope. If it is to be mailed off campus, attach sufficient postage. While we make every attempt to safeguard your manuscript and disk, we cannot be held responsible for their loss.
- 4. Use MLA style, with in-text references, as appropriate to the content and disciplinary approach of your article (see *MLA Style Manual* for guidelines).
- 5. Please include a word count.
- 6. While we will consider articles of unspecified length, preference is given to articles fewer than 20 pages long.
- 7. We reserve the right to edit for clarity and accuracy.
- 8. We will consider one-color artwork (e.g., photographs, line drawings, woodcuts).
- 9. Payment will be made in contributor's copies.

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